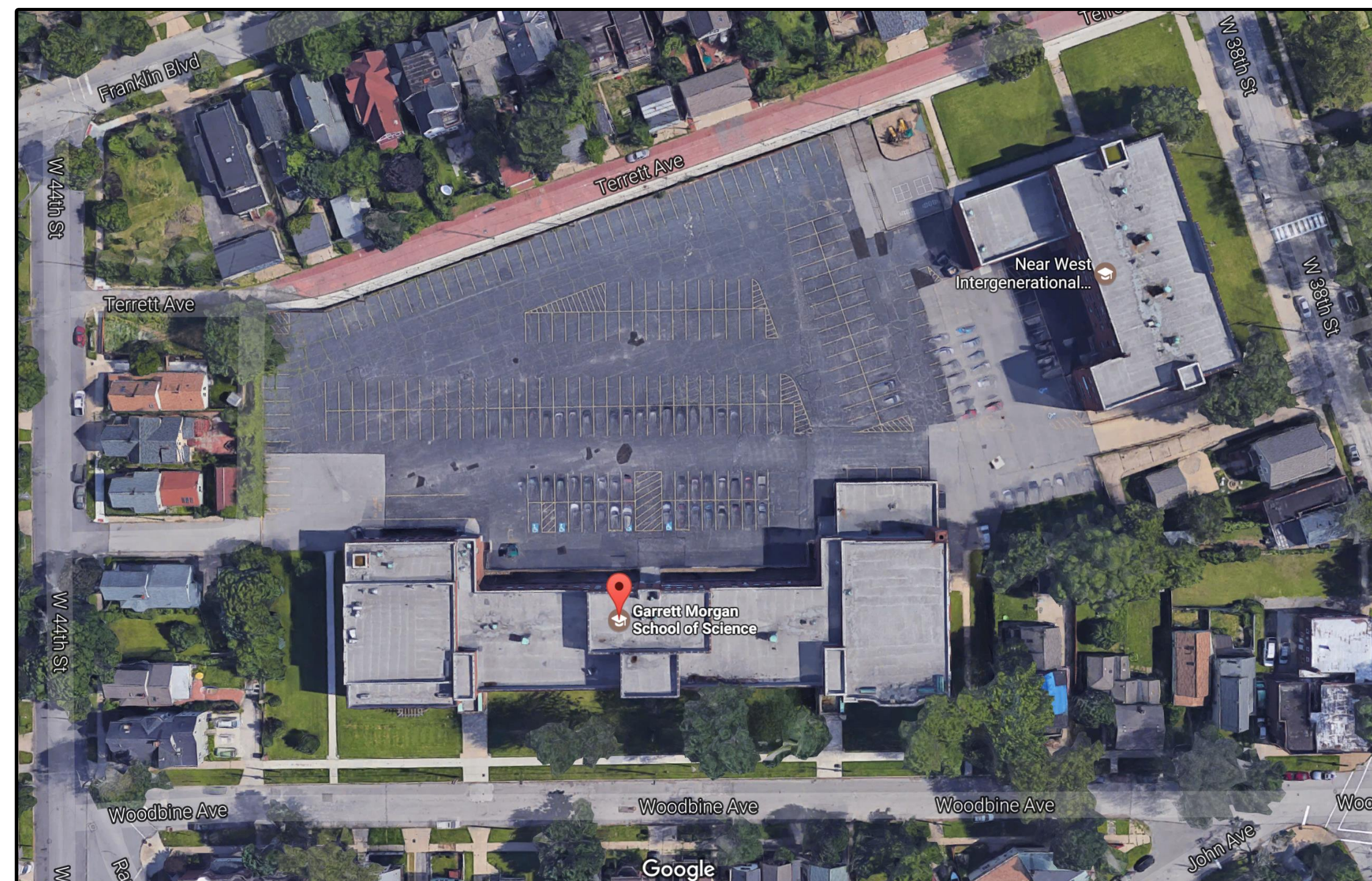


CLEVELAND METROPOLITAN SCHOOL DISTRICT
**GARRETT MORGAN
 ACADEMY**
 HVAC UPGRADES 2018



PROJECT SITE LOCATION – 4016 Woodbine Ave. Cleveland, OH 44113
 NO SCALE

DRAWING INDEX

1	T-01	TITLE PAGE, NOTES AND DRAWING INDEX
2	M-01	EXISTING FIRST FLOOR MECHANICAL PLAN
3	M-02	EXISTING SECOND FLOOR MECHANICAL PLAN
4	M-03	EXISTING THIRD FLOOR MECHANICAL PLAN
5	E-01	EXISTING LOWER LEVEL ELECTRICAL PLAN & S-I SCOPE
6	E-02	EXISTING FIRST FLOOR ELECTRICAL PLAN
7	E-03	EXISTING SECOND FLOOR ELECTRICAL PLAN
8	E-04	EXISTING THIRD FLOOR ELECTRICAL PLAN
9	E-05	EXISTING MAIN POWER DISTRIBUTION PLAN
10	E-06	EXISTING PANELBOARD SCHEDULES
11	E-07	EXISTING 1 ST & 2 ND FLOOR POWER RECEPTACLE PLAN

PROJECT FORMAT OVERVIEW

EACH DESIGN PROFESSIONAL UTILIZED IN CONTRACTOR'S PROPOSAL HAS THE LIBERTY TO ACT WITH THE OWNER'S BEST INTERESTS IN MIND, BASED ON THE INDIVIDUAL SITUATIONS AND BOUNDARIES PRESENTED BEFORE DESIGN BEGINS AND BASED ON QUALIFIED PROFESSIONAL EXPERIENCE. THE CRITERIA SET FORTH IN THESE SPECIFICATIONS AND DRAWINGS IS INTENDED TO BE A GUIDELINE TO LIMIT THE RISKS OF DISSATISFACTION OVER THE BALANCED TOTAL LIFE OF THIS PROJECT, THE FACILITY AND THE OWNER. GENERAL GOALS ARE TO MAKE THE TASKS ASSOCIATED WITH LONG-TERM OWNING/MANAGING THE FACILITY AS EFFECTIVE AND EFFICIENT AS POSSIBLE, INCLUDING THE LIMITATION OF EQUIPMENT/SERVICE PROVIDERS TO THOSE NOTED AS BEING OWNER-PREFERRED AND/OR LISTED WITHIN THESE SPECIFICATIONS.

PROVIDE MATERIALS FOR COMPLETING MECHANICAL AND ASSOCIATED ELECTRICAL INSTALLATIONS AND OTHER FINISHES ACCORDING TO APPLICATIONS REQUIRED USING INDUSTRY STANDARD MEANS-AND-METHODS AND COMMON BEST PRACTICES.

THESE SCHEMATIC DRAWINGS SHOW INTENDED CONFIGURATION OF EQUIPMENT AND MATERIALS WHERE NOTED ALONG WITH EXISTING CONFIGURATIONS FOR REFERENCE TO NEW WORK AND DEMOLITION SCOPES. COORDINATE REMOVAL OF EXISTING AND INSTALLATION OF NEW EQUIPMENT, FIXTURES AND FURNISHINGS WITH INFRASTRUCTURE ALREADY IN-PLACE. CONTRACTOR IS HIGHLY ENCOURAGED TO FIELD VERIFY ALL COUNTS, MEASUREMENTS, DIMENSIONS AND PATHS. DESIGNS AND WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF NATIONAL, STATE & LOCAL CODES AND BEST PRACTICES.

MECHANICAL SYSTEMS – GENERAL NOTES

(APPLIES TO ALL DRAWINGS)

(1) GENERAL HVAC INTENT:
 GENERAL INTENT IS TO DESIGN AND PROPERLY INSTALL A FULLY-FUNCTIONAL AND COMPLIANT HVAC SYSTEM TO CORRESPOND DIRECTLY TO NOTED/DESIGNED UPDATES TO THE BUILDINGS. IT IS EXPECTED THAT A MINI-SPLIT HEAT PUMP SYSTEM BE EMPLOYED AS A BASIS-OF-DESIGN AND BE COMPLETELY COORDINATED WITH ACCOMPANYING DOCUMENTED SCOPES OF WORK.

(2) DESIGN CRITERIA:
 PROPOSERS SHOULD REFER TO OVERALL SPECIFICATIONS AND ACCOMPANYING OWNER'S PROJECT REQUIREMENT (OPR) DOCUMENTS PUBLISHED FOR DESIGN INTENT AND GUIDELINES.

(3) DESIGN & CONSTRUCTION COORDINATION:
 PROPOSERS TO IDENTIFY AND COORDINATE REMOVALS OF EXISTING EQUIPMENT (REFER TO DEMOLITION NOTES) AND COMPLETE IMPLEMENTATION OF NEW HVAC SYSTEM. THIS COORDINATION/CONSTRUCTION INCLUDES, BUT IS NOT LIMITED TO:
 - MAIN HVAC EQUIPMENT: MINI-SPLIT HEAT PUMP
 - AUXILIARY HEATING-ONLY EQUIPMENT WHERE APPLICABLE.
 - CONDENSATE DRAINAGE
 - HVAC ELECTRIC POWER SYSTEMS
 - HVAC LOW-VOLTAGE SYSTEM COMPONENTS (UNITARY CONTROLS, INTERFACE TO FIRE ALARM/SECURITY SYSTEMS, ETC.)
 - EVALUATION/USE OF SUBSTRATE COMPONENTS IN GOOD CONDITION (ROOFS, CEILING/FLOORS, MISC. SUPPORTS, ETC.)

(4) MAIN EQUIPMENT LOCATIONS – GENERAL NOTES:
 COORDINATED WITH ESTABLISHED PROJECT GUIDELINES, PROPERLY DESIGN/LOCATE NEW HVAC EQUIPMENT FOR FUNCTIONALITY, ACOUSTICAL PERFORMANCE & SERVICING AND MAKE PREPARATIONS FOR ALL ASSOCIATED WORK REQUIRED BY OVERALL SCOPES OF WORK (POWER, CONTROL, DRAINS, CEILINGS, LIGHTS, ETC.)
 - OUTDOOR EQUIPMENT: ROOFS PREFERRED, GRADE LOCATIONS REQUIRE DESIGNED VANDAL PROTECTION.
 - INDOOR EQUIPMENT: ABOVE-CEILING IN CLASSROOMS IS PREFERRED, FAN COIL CHOICE TO MATCH SPACE LAYOUT/FUNCTIONS AND COORDINATED PIPING LAYOUTS.
 - CENTRAL VENTILATION EQUIPMENT – EXISTING OPERABLE WINDOWS, MECHANICAL/UTILITY SPACES, ROOFS AND EXISTING WALL PENETRATIONS PREFERRED.

(5) HVAC PIPING, VENTING & DRAINING:
 DESIGN AND PROPERLY INSTALL MINI-SPLIT REFRIGERANT LINES, FITTINGS, VALVES, INSULATION ACCORDING TO MANUFACTURER'S INSTRUCTIONS. INTENT IS NOT TO DISTURB FINISHED SUBSTRATE (WALLS, HARD CEILINGS, FLOORS) BEYOND WHAT IS REQUIRED FOR NEW SYSTEM IMPLEMENTATION. PROVIDE CONDENSATE PANS/DRAIN LINES FOR PROPER REMOVAL OF CONDENSATE. PROVIDE APPLIANCE VENTS/FLUES FOR PROPER REMOVAL OF EXHAUST GASES AND PRESSURE RELIEF.

(6) HVAC CONTROLS:
 DESIGN AND PROPERLY INSTALL UNITARY/PACKAGED CONTROL SYSTEMS AND COMPONENTS AS REQUIRED FOR THE NEW HVAC SYSTEM/SYSTEMS INTEGRATION SCOPES OF WORK.

(7) HVAC-RELATED POWER SYSTEMS:
 DESIGN AND PROPERLY INSTALL ELECTRIC POWER SYSTEMS REQUIRED TO SERVICE NEW HVAC SYSTEMS. COORDINATE SCOPES OF WORK WITH MAIN POWER SYSTEMS/EQUIPMENT UPGRADES (SIZING, LOCATION, DISTRIBUTION PANELS, ETC.) – NO SIGNIFICANT POWER WORK IS EXPECTED BEYOND THAT REQUIRED FOR NEW SYSTEM FUNCTION.

(8) AS-BUILTS:
 EXPECTATION IS TO DELIVER THE OWNER AN HVAC AS-BUILT DRAWING SET INCLUDING EQUIPMENT SCHEDULES, FLOOR LAYOUTS, HVAC PIPE & DUCT PATHS AND SIZES, ZONING LAYOUTS, THERMOSTAT LOCATIONS, ETC. "RED-LINE" STYLE AS-BUILTS ARE ACCEPTABLE.

MAIN ELECTRICAL SYSTEMS – GENERAL NOTES

(APPLIES TO ALL DRAWINGS)

(1) GENERAL ELECTRICAL INTENT:
 GENERAL INTENT IS TO DESIGN AND INSTALL A FULLY-FUNCTIONAL AND COMPLIANT ELECTRICAL POWER SYSTEM (EQUIPMENT AND DISTRIBUTION) TO CORRESPOND DIRECTLY TO NOTED/DESIGNED UPDATES TO THE BUILDINGS. IT IS EXPECTED THAT A MINI-SPLIT HEAT PUMP SYSTEM BE EMPLOYED AS A BASIS-OF-DESIGN FOR THE NEW HVAC SYSTEM AND BE COMPLETELY COORDINATED WITH ACCOMPANYING DOCUMENTED SCOPES OF WORK, INCLUDING A REQUIRED SERVICE AMP UPGRADE FOR ADEQUATELY POWERING THE NEW EQUIPMENT IF NECESSARY.

(2) DESIGN CRITERIA:
 PROPOSERS SHOULD REFER TO OVERALL SPECIFICATIONS AND ACCOMPANYING OWNER'S PROJECT REQUIREMENT (OPR) DOCUMENTS PUBLISHED FOR DESIGN INTENT AND GUIDELINES.

(3) DESIGN & CONSTRUCTION COORDINATION:
 PROPOSERS TO IDENTIFY AND COORDINATE REMOVALS OF EXISTING EQUIPMENT (REFER TO DEMOLITION NOTES) AND COMPLETE IMPLEMENTATION OF NEW HVAC/ELECTRICAL POWER SYSTEM. THIS COORDINATION/CONSTRUCTION INCLUDES, BUT IS NOT LIMITED TO:
 - DISTRIBUTION PANELS (HVAC POWER, LIGHTING/LIGHTING CONTROL PANELS, RECEPTACLE PANELS, INCLUDING REWORKS OF LEGACY PANELS AS REQUIRED, ETC.)
 - HVAC LOW-VOLTAGE SYSTEM COMPONENTS (UNITARY CONTROLS, INTERFACE TO FIRE ALARM/SECURITY SYSTEMS, ETC.)
 - EVALUATION/USE OF SUBSTRATE COMPONENTS IN GOOD CONDITION (ROOFS, CEILING/FLOORS, MISC. SUPPORTS, ETC.)

(4) MAIN EQUIPMENT LOCATIONS – GENERAL NOTES:
 COORDINATED WITH ESTABLISHED PROJECT GUIDELINES, PROPERLY DESIGN/LOCATE NEW MAIN ELECTRICAL EQUIPMENT FOR FUNCTIONALITY, SAFETY & SERVICING AND MAKE PREPARATIONS FOR ALL ASSOCIATED WORK REQUIRED BY OVERALL SCOPES OF WORK (PANELS, EQUIPMENT, CONTROLS, WALLS, CEILINGS, FLOORS, ETC.)
 - INDOOR PANEL/LOAD CENTER EQUIPMENT – EXISTING MECHANICAL/UTILITY SPACES AND EXISTING WALL LOCATIONS PREFERRED, SELECTED/CONSTRUCTED FOR HEAVY-DUTY ENVIRONMENTS.

(5) MAIN ELECTRIC RACEWAYS:
 DESIGN AND PROPERLY INSTALL MAIN ELECTRIC POWER FEEDS, RACEWAYS AND CABLES WITH INSULATION/ACCESS ACCORDING TO USUAL & CUSTOMARY METHODS AND PERTINENT REGULATIONS. INTENT IS NOT TO DISTURB FINISHED SUBSTRATE (WALLS, HARD CEILINGS, FLOORS) BEYOND WHAT IS REQUIRED FOR NEW SYSTEM IMPLEMENTATION.

(6) HVAC CONTROLS:
 COORDINATE WITH MECHANICAL VENDORS AND SYSTEMS INTEGRATOR TO PROPERLY INSTALL UNITARY/PACKAGED CONTROL SYSTEMS & COMPONENTS AS REQUIRED FOR THE NEW HVAC SYSTEMS INTEGRATION SCOPES OF WORK (SYSTEMS INTEGRATION COMPONENTS AS-NOTED BY AGM ENERGY SERVICES).

(7) HVAC-RELATED POWER SYSTEMS:
 DESIGN AND PROPERLY INSTALL ELECTRIC POWER SYSTEMS REQUIRED TO SERVICE NEW HVAC SYSTEMS. COORDINATE SCOPES OF WORK WITH MAIN POWER SYSTEMS/EQUIPMENT UPGRADES (SIZING, LOCATION, DISTRIBUTION PANELS, ETC.) AND PROVIDE PROPER MEANS OF FUSING AND DISCONNECT.

(8) AS-BUILTS:
 EXPECTATION IS TO DELIVER THE OWNER AN ELECTRICAL AS-BUILT DRAWING SET INCLUDING PANEL SCHEDULES, FLOOR LAYOUTS, COMPLETE ONE-LINE DIAGRAM, ETC.

DEMOLITION SCOPE – GENERAL NOTES

(APPLIES TO ALT-1 SCOPE)

(1) GENERAL DEMOLITION INTENT:
 SURVEY ALL EXISTING CONDITIONS AND MAKE APPROPRIATE PREPARATIONS FOR REMOVALS TO CORRESPOND DIRECTLY WITH NOTED AND/OR DESIGNED UPDATES TO THE BUILDING. IT IS NOT EXPECTED THAT ANY CONCEALED PIPING WILL BE REMOVED, UNLESS IT IS REQUIRED BY FIELD CONDITIONS OR REPLACEMENT SCOPE OF WORK. OVERALL EXISTING STEAM HEATING SYSTEM IS TO REMAIN UNLESS NOTED-AFFECTED IN THE DEMOLITION SCOPE OF WORK.

(2) EXISTING HAZARDOUS MATERIALS:
 PROPOSERS CAN ANTICIPATE THAT EXISTING HAZARDOUS MATERIALS ON THE STEAM HEATING SYSTEM, IF THEY EXIST, WILL BE REMOVED PRIOR TO PROJECT COMMENCEMENT.

(3) EXISTING STEAM HEATING EQUIPMENT AND PLUMBING EQUIPMENT (AFFECTED ONLY):
 COORDINATED WITH ESTABLISHED PROJECT SCHEDULES, PROPERLY REMOVE AND DISPOSE OF EXISTING STEAM HEATING AND PLUMBING EQUIPMENT.

(4) EXISTING STEAM HEATING PIPING AND PLUMBING PIPING (AFFECTED ONLY):
 REMOVE AND PROPERLY DISPOSE OF EXPOSED LINES, FITTINGS, VALVES AND TRAPS, MAKING SAFE AND SEALING AT ALL LOCATIONS WHERE EXISTING MEETS THE FINISHED SUBSTRATE (WALLS, HARD CEILINGS, FLOORS). IT IS NOT EXPECTED THAT ANY CONCEALED STEAM PIPING WILL BE REMOVED, UNLESS REQUIRED BY FIELD CONDITIONS OR REPLACEMENT SCOPE OF WORK. PROPERLY CAP AND MAKE SAFE ANY REMAINING STEAM OR PLUMBING LINES.

(5) EXISTING STEAM HEATING CONTROLS (AFFECTED ONLY):
 REMOVE AND PROPERLY DISPOSE OF EXPOSED PNEUMATIC LINES AND WIRING, FITTINGS, VALVES, MAKE SAFE AND SEAL AT ALL LOCATIONS WHERE EXISTING MEETS THE FINISHED SUBSTRATE (WALLS, HARD CEILINGS, FLOORS). IT IS NOT EXPECTED THAT AND CONCEALED PNEUMATIC CONTROL LINES WILL BE REMOVED, UNLESS IT IS REQUIRED BY FIELD CONDITIONS OR REPLACEMENT SCOPE OF WORK.



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 TWINSBURG, OH 44087

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 www.AGMenergyservices.com

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PROJECT TITLE:
**GARRETT MORGAN
 ACADEMY
 HVAC UPGRADES
 2018**

4016 Woodbine Ave.
 Cleveland, OH 44113



PROJECT NUMBER: **80511**
 DATE DRAWN: **5/10/2017**
 BY: **LSH**

#	REVISION	DATE
1	FOR BID	2/2/18
2	---	---
3	---	---
4	---	---
5	---	---

SCALE: **AS NOTED**

DRAWING TITLE:

**TITLE PAGE,
 NOTES &
 DRAWING
 INDEX**

DRAWING NUMBER: **T-01**
 PAGE: 1 of 11

PROJECT TITLE:
**GARRETT MORGAN
ACADEMY
HVAC UPGRADES
2018**

4016 Woodbine Ave.
Cleveland, OH 44113



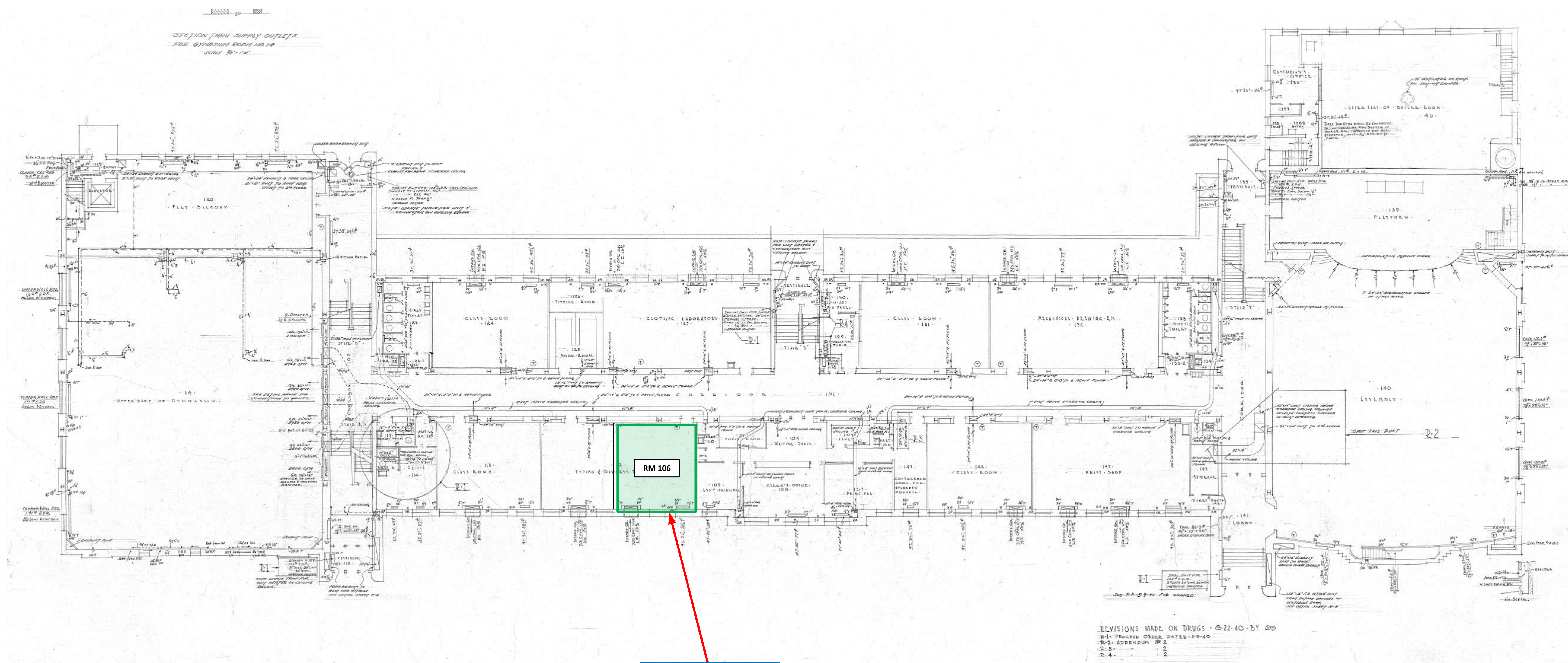
PROJECT NUMBER: 80511
DATE DRAWN: 5/10/2017
BY: LSH

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1	FOR BID	2/2/18
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SCALE: AS NOTED

DRAWING TITLE:
**EXISTING
FIRST FLOOR
MECHANICAL
PLAN**

DRAWING NUMBER:
M-01



**ALT-1: DEMOLITION OF EXIST. HVAC
EQUIPMENT IN BASE SCOPE
(TYPICAL OF ALL ROOMS IN SCOPE)**



EXISTING UNIT VENTILATOR - TYPICAL

SCOPE KEY

BASE SCOPE INSTALLATION OF NEW MINI-SPLIT EQUIPMENT IN NOTED ROOMS.

ALTERNATE 1 DEMOLITION OF EXISTING HVAC UNIT VENTILATOR EQUIPMENT IN ALL BASE SCOPE IDENTIFIED ROOMS.

**EXISTING MECHANICAL PLANS
FOR REFERENCE ONLY
(NO SCALE)
FIELD VERIFY INFORMATION**

PROJECT TITLE:
**GARRETT MORGAN
ACADEMY
HVAC UPGRADES
2018**

4016 Woodbine Ave.
Cleveland, OH 44113



PROJECT NUMBER: 80511
DATE DRAWN: 5/10/2017
BY: LSH

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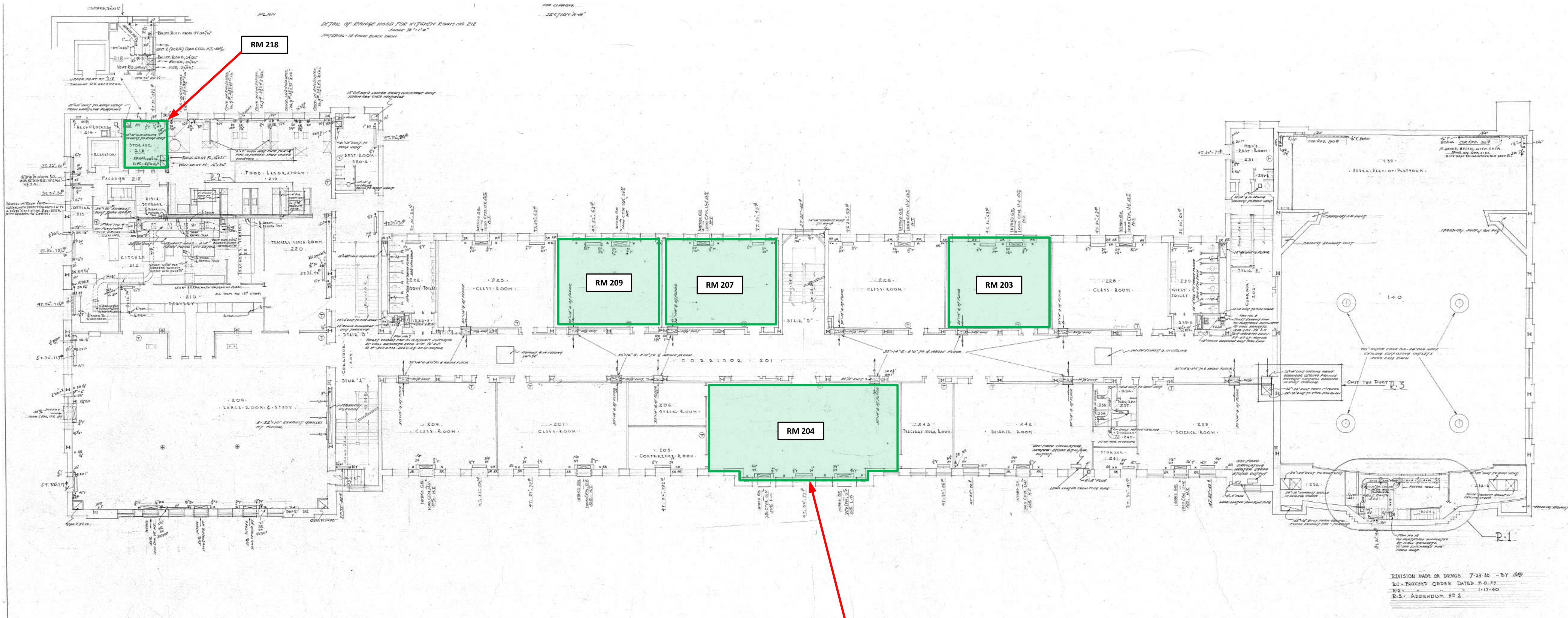
SCALE: AS NOTED

DRAWING TITLE:

**EXISTING
SECOND FL
MECHANICAL
PLAN**

DRAWING NUMBER:

M-02



**ALT-1: DEMOLITION OF EXIST. HVAC
EQUIPMENT IN BASE SCOPE
(TYPICAL OF ALL ROOMS IN SCOPE)**

SCOPE KEY

BASE SCOPE INSTALLATION OF NEW MINI-SPLIT EQUIPMENT IN NOTED ROOMS.

ALTERNATE 1 DEMOLITION OF EXISTING HVAC UNIT VENTILATOR EQUIPMENT IN ALL BASE SCOPE IDENTIFIED ROOMS.

**EXISTING MECHANICAL PLANS
FOR REFERENCE ONLY
(NO SCALE)
FIELD VERIFY INFORMATION**



EXISTING UNIT VENTILATOR - TYPICAL



EXTERIOR ELEVATION AND UV LOUVERS

PROJECT TITLE:

**GARRETT MORGAN
ACADEMY
HVAC UPGRADES
2018**

4016 Woodbine Ave.
Cleveland, OH 44113



PROJECT NUMBER: 80511
DATE DRAWN: 5/10/2017
BY: LSH

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SCALE: AS NOTED

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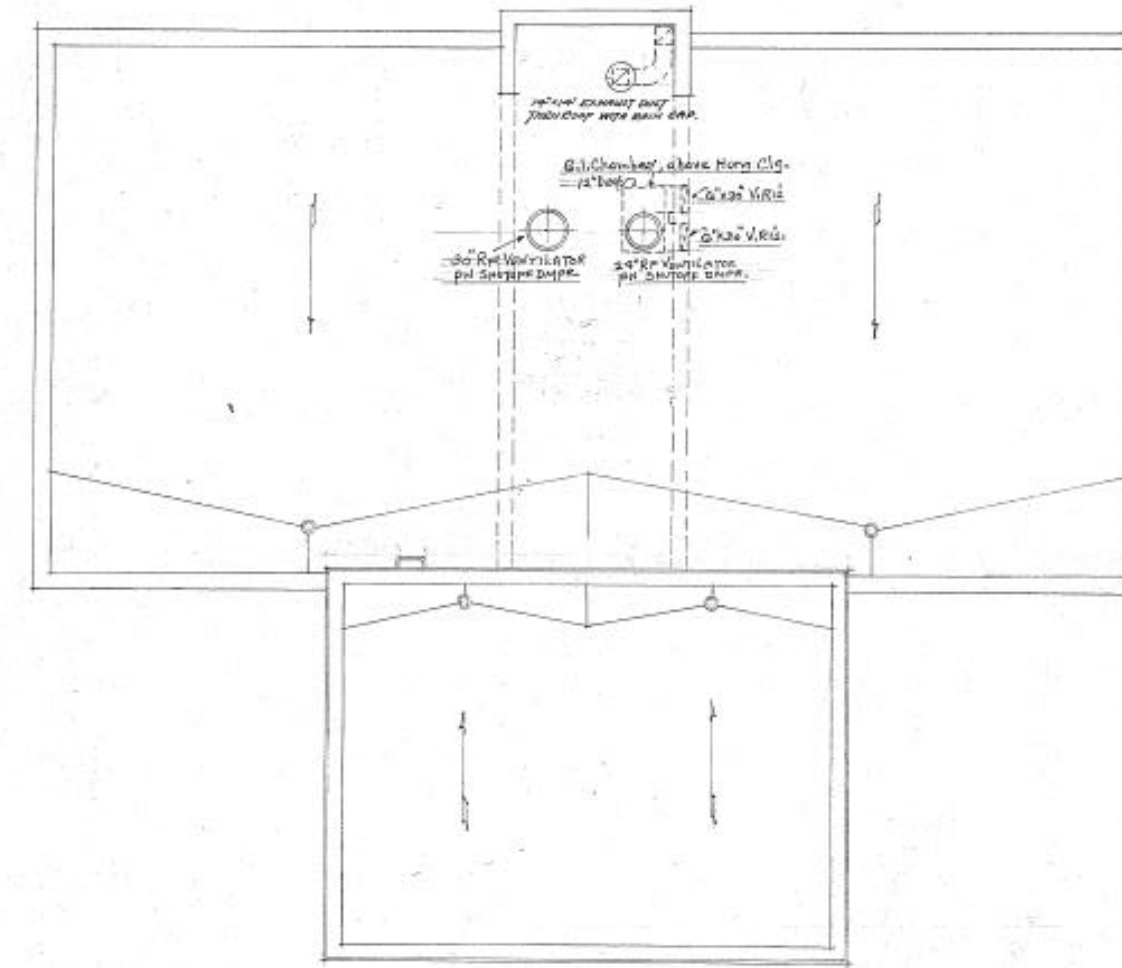
**EXISTING
THIRD FLOOR
MECHANICAL
PLAN**

DRAWING NUMBER:

M-03



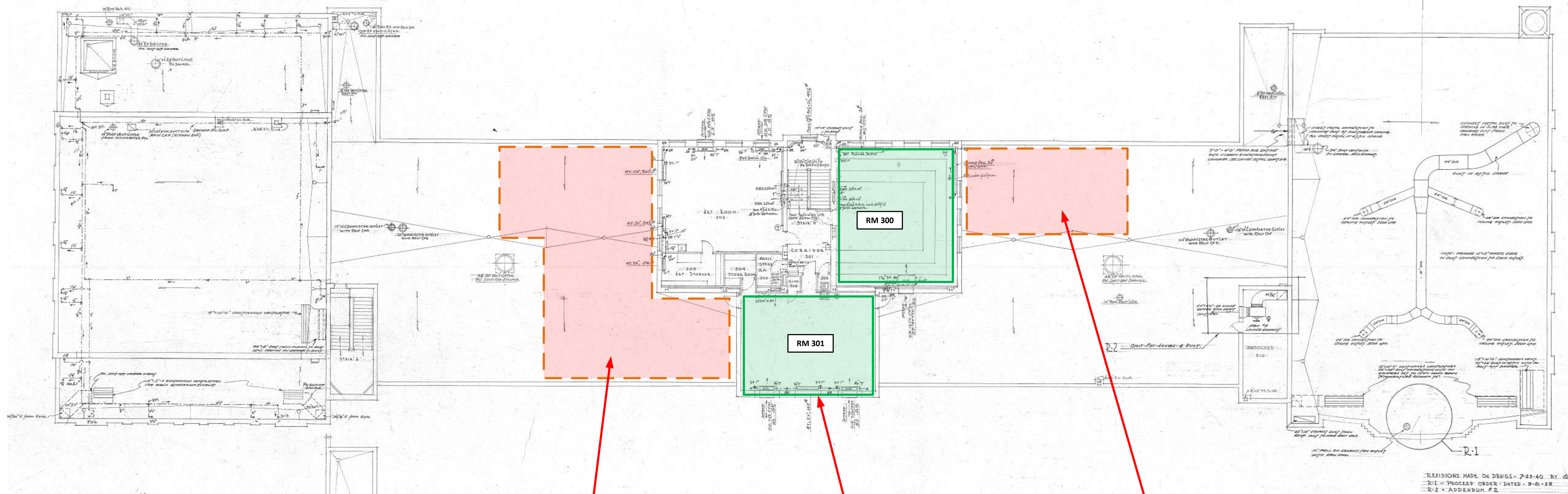
FLAT ROOF AREA FOR EXTERIOR MECHANICAL EQUIPMENT



SCOPE KEY

BASE SCOPE INSTALLATION OF NEW MINI-SPLIT EQUIPMENT IN NOTED ROOMS.

ALTERNATE 1 DEMOLITION OF EXISTING HVAC UNIT VENTILATOR EQUIPMENT IN ALL BASE SCOPE IDENTIFIED ROOMS.



POSSIBLE LOCATIONS FOR
OUTDOOR UNIT SECTIONS

ALT-1: DEMOLITION OF EXIST. HVAC
EQUIPMENT IN BASE SCOPE
(TYPICAL OF ALL ROOMS IN SCOPE)

POSSIBLE LOCATIONS FOR
OUTDOOR UNIT SECTIONS

**EXISTING MECHANICAL PLANS
FOR REFERENCE ONLY
(NO SCALE)
FIELD VERIFY INFORMATION**

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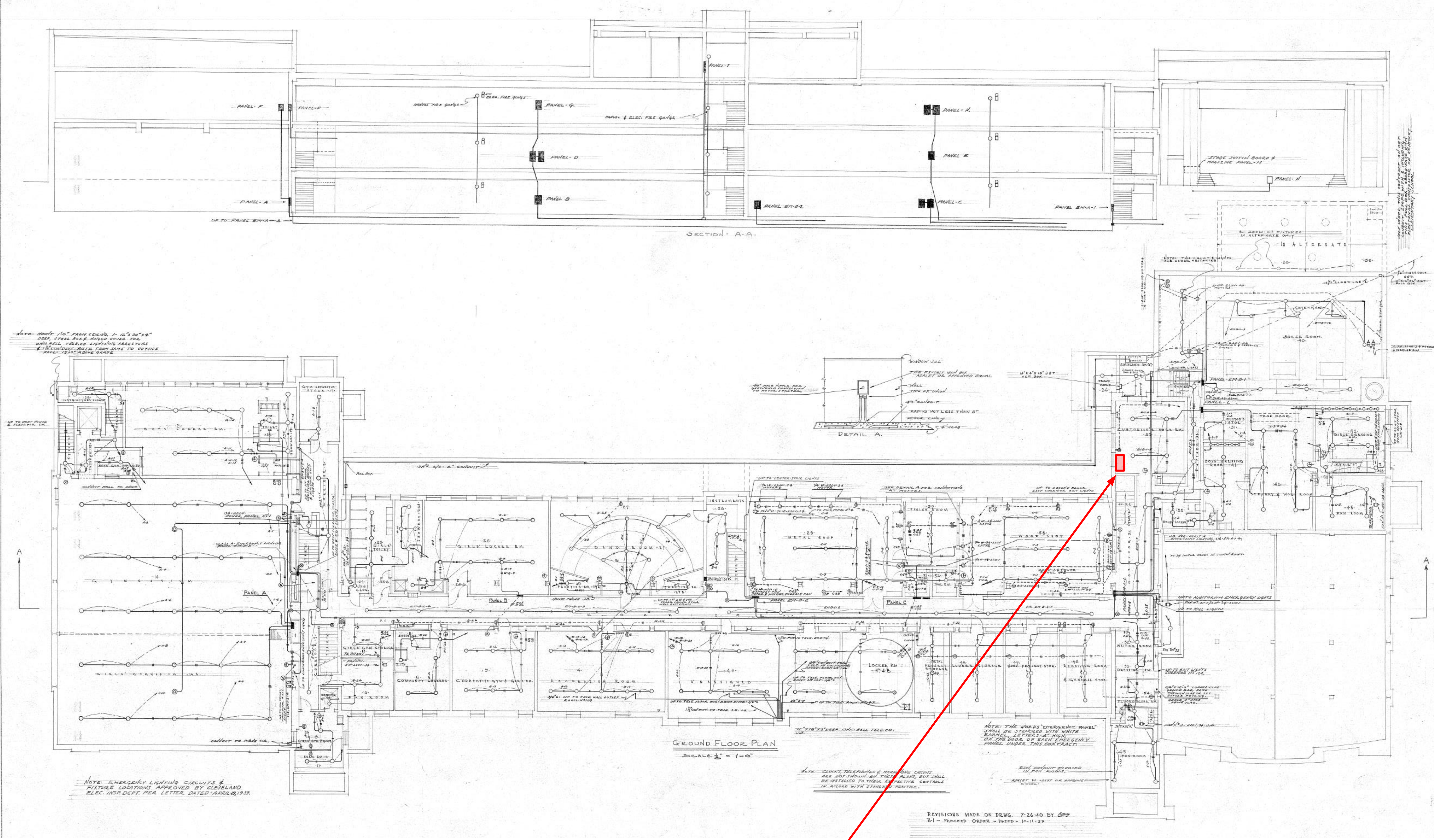
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SCALE: AS NOTED

DRAWING TITLE:
**EXISTING
LOWER LEVEL
ELECTRICAL
PLAN & S-I
SCOPE**

DRAWING NUMBER: **E-01**
PAGE: 5 of 11



SYSTEMS INTEGRATION NOTES:

- INSTALL NEW JACE 8000 AND ENCLOSURE IN CUSTODIAL OFFICE (PROVIDED BY DISTRICT SYSTEMS INTEGRATOR). PRECISE LOCATION TO BE FIELD VERIFIED DURING PROJECT EXECUTION COORDINATION.
- RUN BACNET COMMUNICATION CABLE (BELDEN 6501FE OR EQUAL) FROM MINI-SPLIT GATEWAY TO JACE.
- COORDINATE FIELD INTEGRATION FUNCTIONS WITH AGM ENERGY SERVICES.

LOCATION OF NEW JACE 8000 AND ENCLOSURE

**EXISTING ELECTRICAL PLANS
FOR REFERENCE ONLY
(NO SCALE)
FIELD VERIFY INFORMATION**

EXISTING LOWER LEVEL ELECTRICAL
NO SCALE

PROJECT TITLE:

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PROJECT NUMBER: 80511
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3	---	---
4	---	---
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SCALE: AS NOTED

DRAWING TITLE:

**EXISTING
FIRST FLOOR
ELECTRICAL
PLAN**

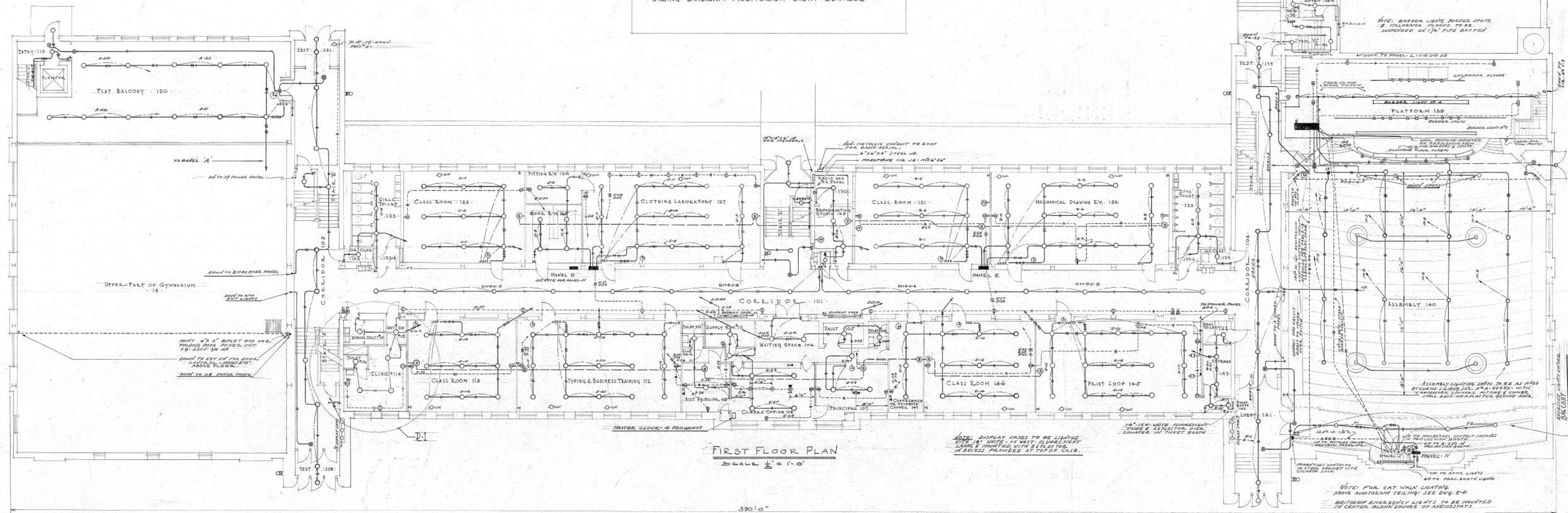
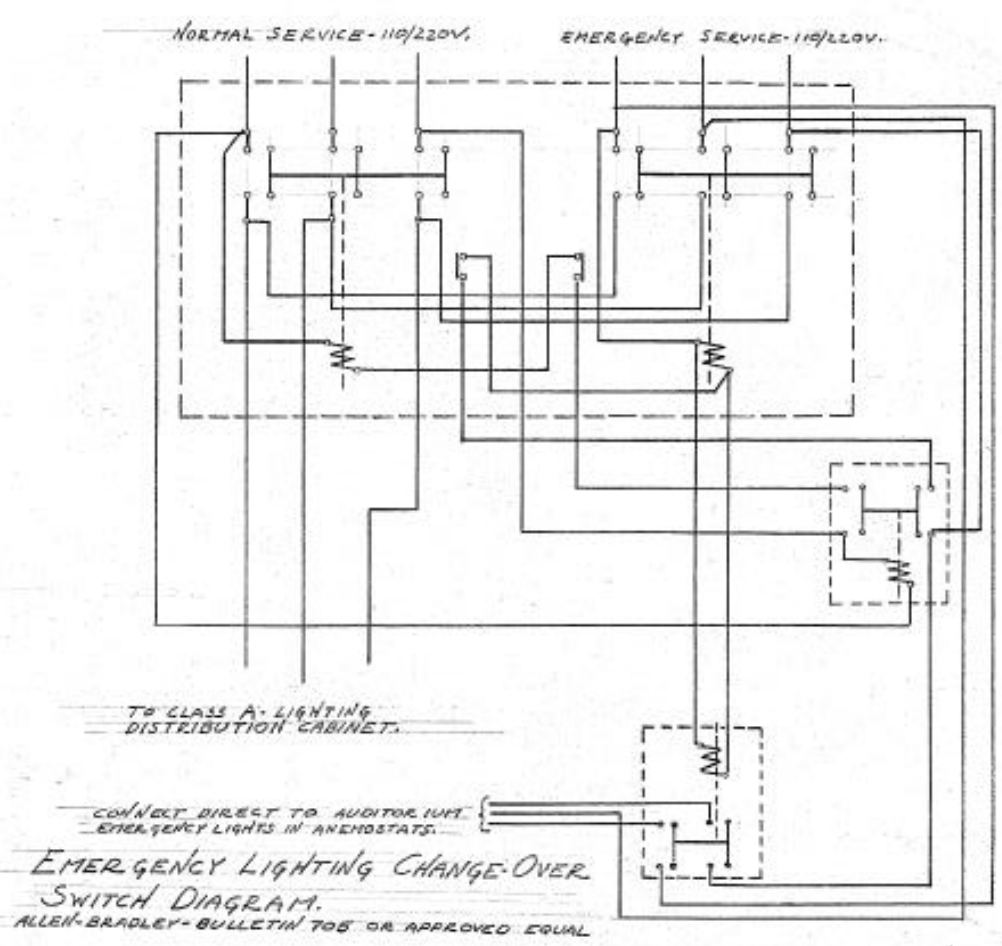
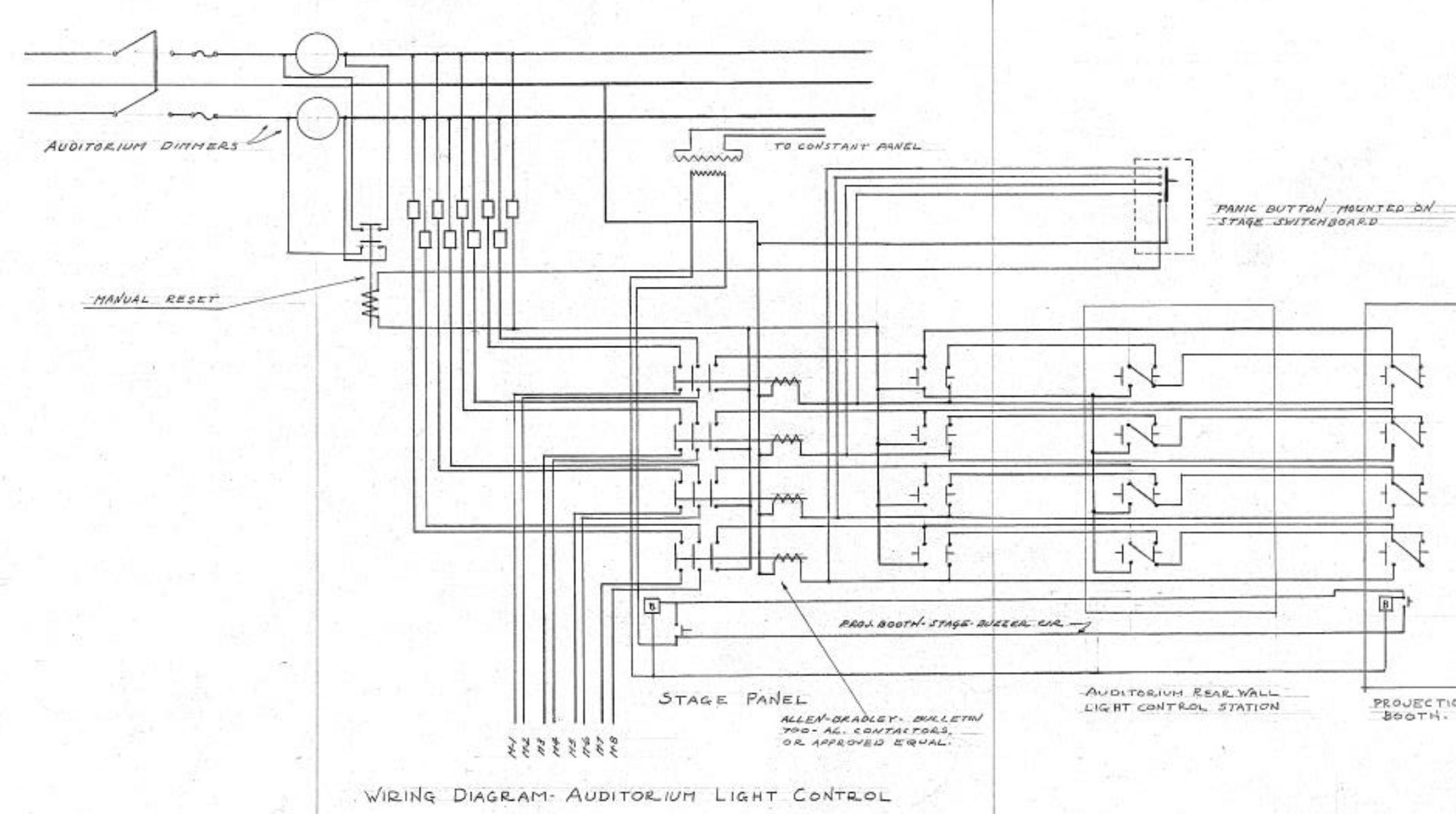
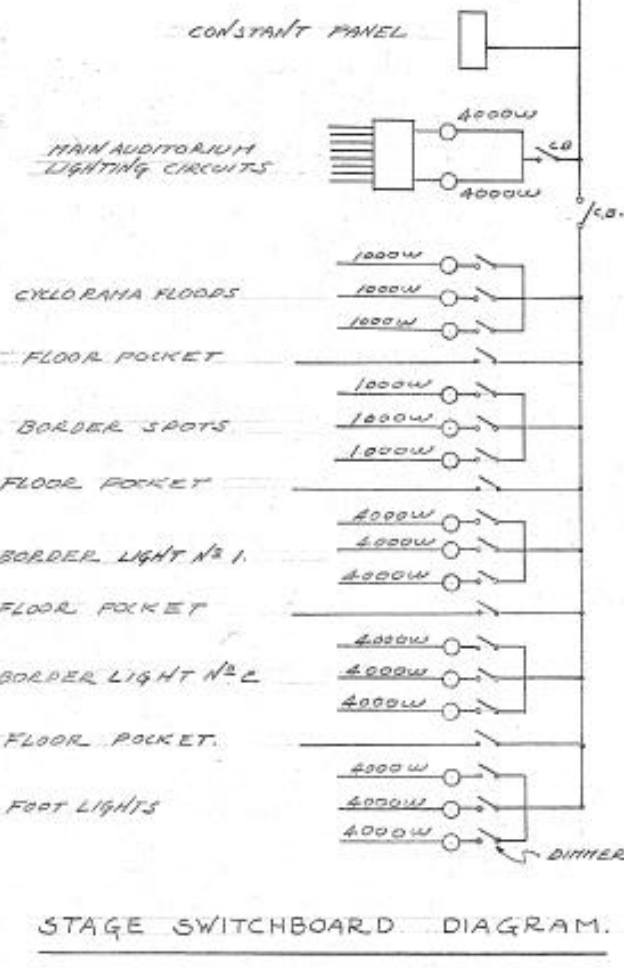
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E-02

PAGE: 6 of 11

ELECTRICAL LEGEND

0	LIGHTING OUTLET
1	EXIT LIGHT - 2-25 LAMPS
2	PUBLIC ADDRESS SPEAKER
3	MUSIC/PHONE OUTLET
4	ELECTRIC CLOCK
5	FLOOR OUTLET
6	CONFERENCE OUTLET
7	SPECIAL OUTLET - MOTORS-RANGE-ETC.
8	UNIT VENTILATOR OUTLET
9	CONFERENCE OUTLET, FLOOR & SW.
10	SINGLE POLE-TWILER SW-30A-125V
11	THREE WAY SW-125V SWITCH
12	SINGLE POLE LOCK SWITCH
13	DOOR SW. TELE. BOOTH
14	OHIO BELL TELE. OUTLET
15	FIRE ALARM BONG
16	PROGRAM BELL



REVISIONS MADE ON DRAWINGS 2-10 BY DSS
2-1 - PROCEED ORDER DATED 4-24-10

**EXISTING ELECTRICAL PLANS
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FIELD VERIFY INFORMATION**

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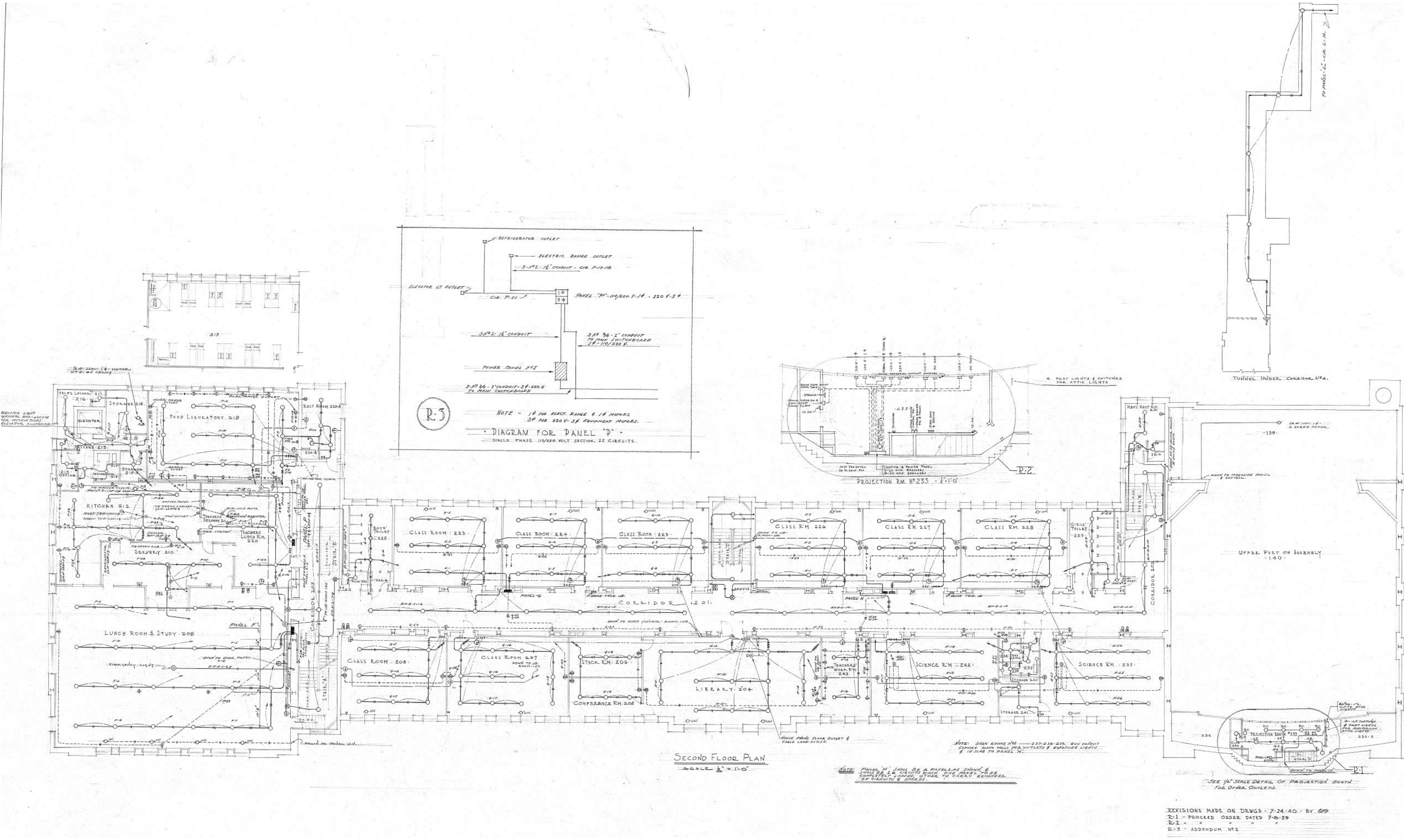
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SCALE: AS NOTED

DRAWING TITLE:
**EXISTING
SECOND FL
ELECTRICAL
PLAN**

DRAWING NUMBER: **E-03**
PAGE: 7 of 11



**EXISTING ELECTRICAL PLANS
FOR REFERENCE ONLY
(NO SCALE)
FIELD VERIFY INFORMATION**

EXISTING SECOND FLOOR ELECTRICAL
NO SCALE

PROJECT TITLE:

**GARRETT MORGAN
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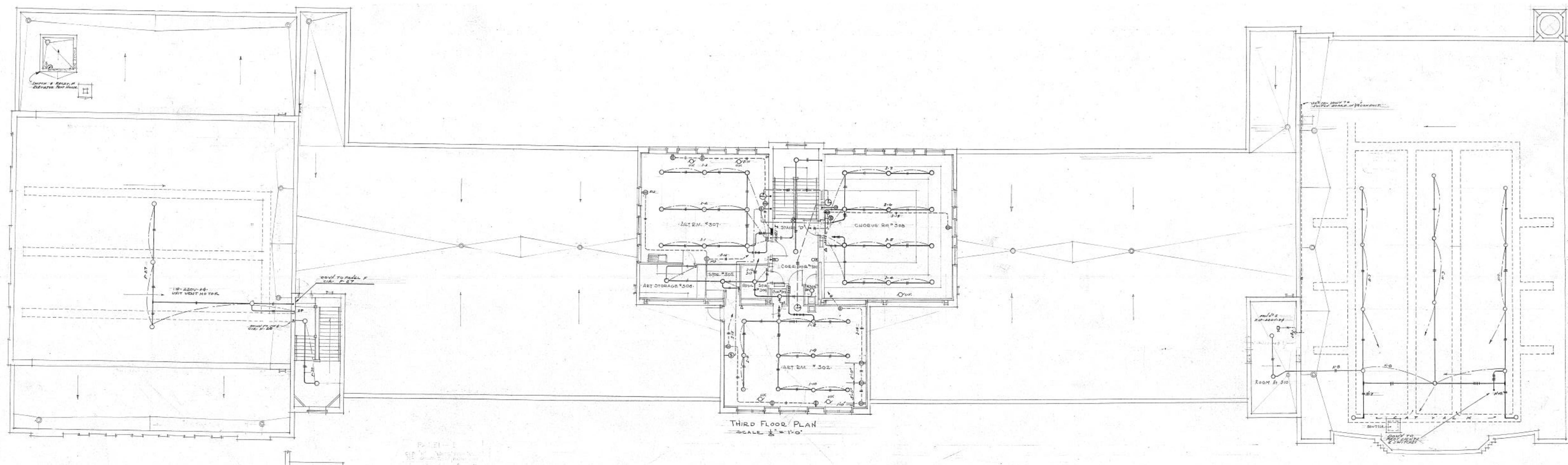
DRAWING TITLE:

**EXISTING
THIRD FLOOR
ELECTRICAL
PLAN**

DRAWING NUMBER:

E-04

PAGE: 8 of 11



THIRD FLOOR PLAN
SCALE 1/4" = 1'-0"

**EXISTING ELECTRICAL PLANS
FOR REFERENCE ONLY
(NO SCALE)
FIELD VERIFY INFORMATION**

PROJECT TITLE:

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4	---	---
5	---	---

SCALE: AS NOTED

DRAWING TITLE:

**EXISTING
PANELBOARD
SCHEDULES**

DRAWING NUMBER:

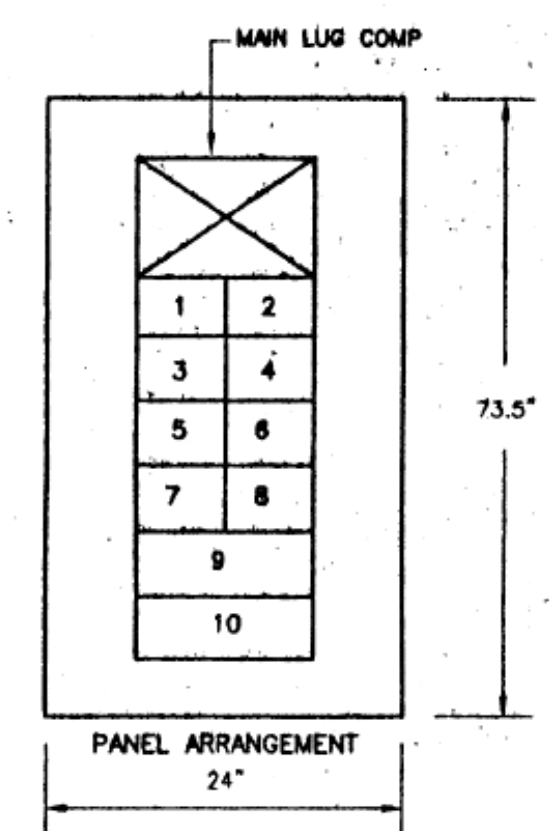
E-06

PAGE: 10 of 11

UNIT NO.	EQUIPMENT CONNECTED	VOLTAGE & PHASE	CONN. LOAD KW	O.C. DEVICE FRAME SIZE B-BRKR. F-SW.FUSE	TRIP RATING OR FUSE SIZE	FEEDER NO.	CONDUIT & WIRE SIZE	REMARKS
1	AIR COMPRESSOR	230/3		B 30A 3P	30A		3/10, 1#10G.	
2	CUST. EXH. FAN	230/3		B 30A 3P	25A		3/10, 1#10G.	
3	UNIT VENT.	230/3		B 30A 3P	25A		3/10, 1#10G.	
4	FAN #4	230/3		B 80A 3P	50A		3/8, 1#10G.	
5	EAST EXH. FAN	230/3		B 80A 3P	40A		3/8, 1#10G.	
6	PROTECTION BOOTH	230/3		B 80A 3P	50A		3/8, 1#10G.	
7	VACUUM PUMP	230/3		B 80A 3P	50A		3/8, 1#10G.	
8	PANELS PP-2 & 4	230/3		B 100A	70A		3/4, 1#8G.	
9	SPACE			B 80A				
10	PANEL PP-1	230/3		B 200A	150A		3/10, 1#8G.	

FIRST LINE	SECOND LINE	THIRD LINE
DP-1	230V 3# 3W.	BLDG. EQUIP. POWER

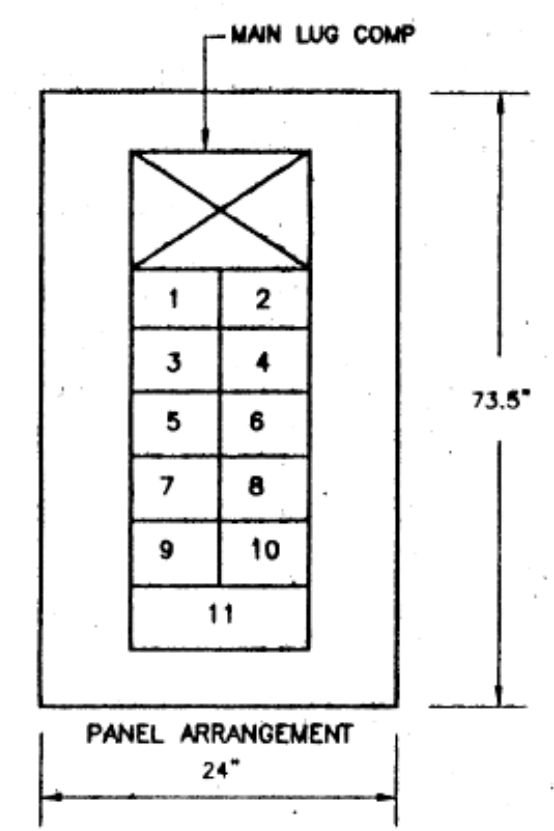
PANEL TYPE	DISTRIBUTION
PANEL LOCATION	BASEMENT
PANEL MOUNTING	SURFACE
SYSTEM & USE	BUILDING POWER
VOLTAGE/PHASE/WIRE	230V, 3# 3W.
MAIN BUS RATING	250A
MAIN DEVICE	NONE
MIN. S.C.C. RATING SYM.	22,000 SYM. RMS.
TOTAL CONNECTED LOAD	30KW
FEEDER SIZE	3#3/0, 1#2G.
UNIT FED FROM	UTILITY MAIN



UNIT NO.	EQUIPMENT CONNECTED	VOLTAGE & PHASE	CONN. LOAD KW	O.C. DEVICE FRAME SIZE B-BRKR. F-SW.FUSE	TRIP RATING OR FUSE SIZE	FEEDER NO.	CONDUIT & WIRE SIZE	REMARKS
1	SUMP PUMP	230/3		B 30A 3P	25A		3/10, 1#10G.	
2	BSMT. SUPPLY FAN	230/3		B 30A 3P	25A		3/10, 1#10G.	
3	BASEMENT EXH. FAN	230/3		B 80A 3P	40A		3/8, 1#10G.	
4	BOILERS	230/3		B 80A 3P	50A		3/8, 1#10G.	
5	CONDENSER	230/3		B 80A 3P	50A		3/8, 1#10G.	
6	SPARE			B 80A 3P				
7	SPARE			B 100A 3P				
8	SPARE			B 100A 3P				
9	SPARE			B 80A 3P				
10	SPARE			B 100A 3P				
11	SPACE			B				

FIRST LINE	SECOND LINE	THIRD LINE
DP-2	230V 3# 3W.	BLDG. EQUIP. POWER

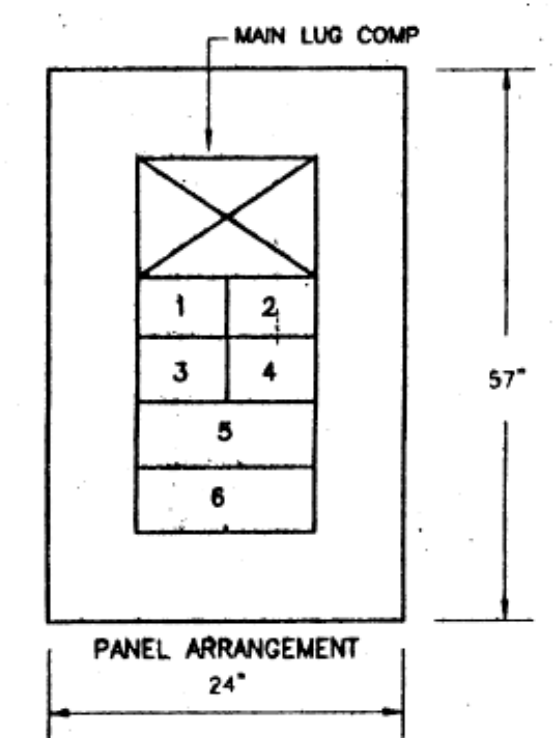
PANEL TYPE	DISTRIBUTION
PANEL LOCATION	BASEMENT
PANEL MOUNTING	SURFACE
SYSTEM & USE	BUILDING POWER
VOLTAGE/PHASE/WIRE	230V, 3# 3W.
MAIN BUS RATING	250A
MAIN DEVICE	NONE
MIN. S.C.C. RATING SYM.	22,000 SYM. RMS.
TOTAL CONNECTED LOAD	19KW
FEEDER SIZE	3#3/0, 1#2G.
UNIT FED FROM	UTILITY MAIN



UNIT NO.	EQUIPMENT CONNECTED	VOLTAGE & PHASE	CONN. LOAD KW	O.C. DEVICE FRAME SIZE B-BRKR. F-SW.FUSE	TRIP RATING OR FUSE SIZE	FEEDER NO.	CONDUIT & WIRE SIZE	REMARKS
1	PANEL "N"	120/240		B 30A 2P	20A		3#12, 1#12G.	
2	SPACE			B 30A 2P				
3	PANEL "EMB"	120/240		B 100A 2P	70A		3/4, 1#8G.	
4	PANEL "P"	120/240		B 100A 2P	90A		3/3, 1#8G.	
5	PANEL "C"	120/240		B 400A 2P	225A		3/4/0, 1#4G.	
6	PANEL "EH"	120/240		B 400A 2P	350A		3#350KCMIL, 1#3G.	

FIRST LINE	SECOND LINE	THIRD LINE
DLP-1	120/240V, 1# 3W.	LIGHTING & RECEPTACLES

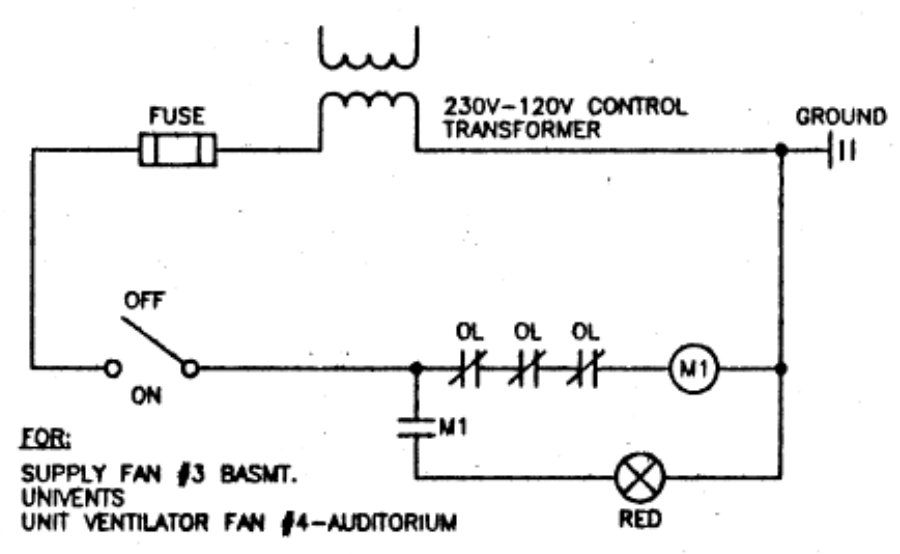
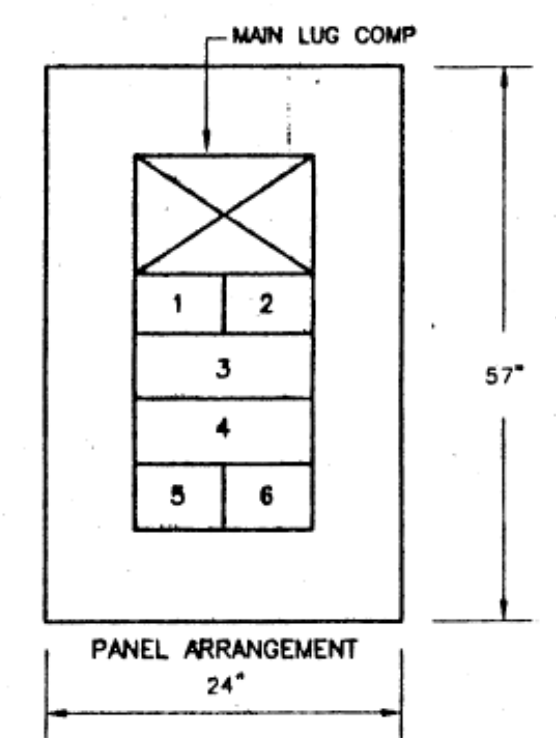
PANEL TYPE	DISTRIBUTION
PANEL LOCATION	BASEMENT
PANEL MOUNTING	SURFACE
SYSTEM & USE	LIGHTING & RECEPTACLES
VOLTAGE/PHASE/WIRE	120/240V 1# 3W. FULL SIZE NEUTR.
MAIN BUS RATING	400A
MAIN DEVICE	NONE
MIN. S.C.C. RATING SYM.	22,000A MIN. SYM. RMS.
TOTAL CONNECTED LOAD	55KW
FEEDER SIZE	3#500KCMIL & 1#1/0G.
UNIT FED FROM	UTILITY MAIN



UNIT NO.	EQUIPMENT CONNECTED	VOLTAGE & PHASE	CONN. LOAD KW	O.C. DEVICE FRAME SIZE B-BRKR. F-SW.FUSE	TRIP RATING OR FUSE SIZE	FEEDER NO.	CONDUIT & WIRE SIZE	REMARKS
1	PANEL "EMB1"	120/240		B 100A 2P	70A		3/4, 1#8G.	
2	PANEL "L"	120/240		B 100A 2P	90A		3/3, 1#8G.	
3	PANEL "A" & "F"	120/240		B 400A 2P	250A		3#250KCMIL, 1#4G.	
4	PANELS "B,D & G"	120/240		B 400A 2P	400A		3#500KCMIL, 1#3G.	
5	PANEL "EM"	120/240		B 80A 2P	50A		3/8, 1#10G.	
6	SPACE	120/240		B 80A 2P				

FIRST LINE	SECOND LINE	THIRD LINE
DLP-2	120/240V, 1# 3W.	LIGHTING & RECEPTACLES

PANEL TYPE	DISTRIBUTION
PANEL LOCATION	BASEMENT
PANEL MOUNTING	SURFACE
SYSTEM & USE	LIGHTING AND RECEPTACLES
VOLTAGE/PHASE/WIRE	120/240V 1# 3W. FULL SIZE NEUTR.
MAIN BUS RATING	400A
MAIN DEVICE	NONE
MIN. S.C.C. RATING SYM.	22,000A MIN. SYM. RMS.
TOTAL CONNECTED LOAD	55KW
FEEDER SIZE	3#500KCMIL, 1#1/0G.
UNIT FED FROM	UTILITY MAIN

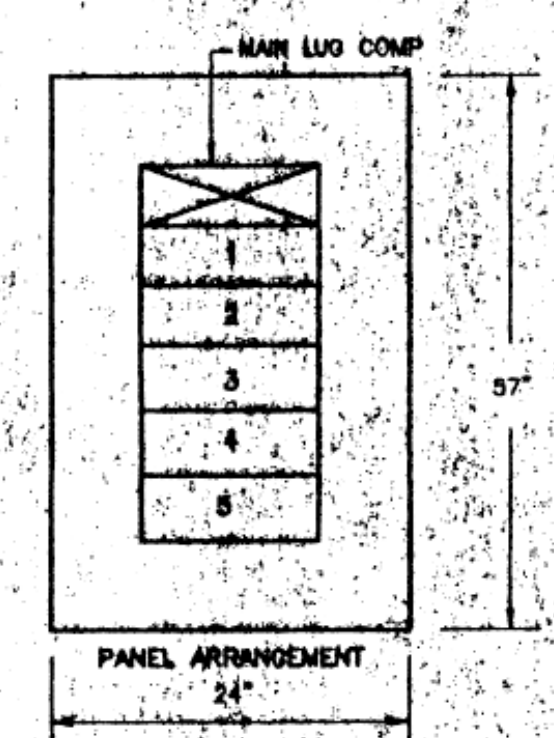


WIRING DIAGRAM #1
N.T.S.

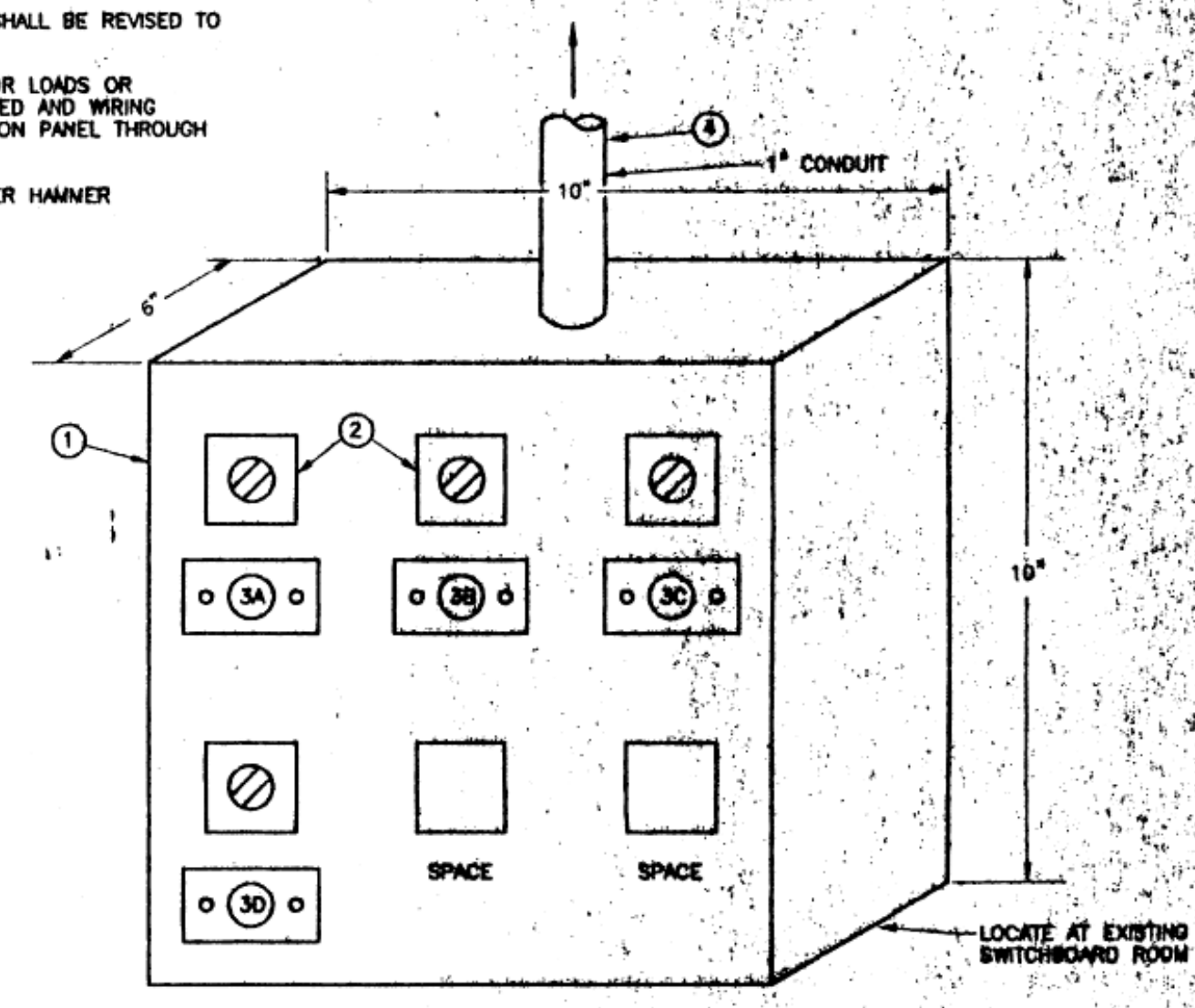
UNIT NO.	EQUIPMENT CONNECTED	VOLTAGE & PHASE	CONN. LOAD KW	O.C. DEVICE FRAME SIZE B-BRKR. F-SW.FUSE	TRIP RATING OR FUSE SIZE	FEEDER NO.	CONDUIT & WIRE SIZE	REMARKS
1	3RD FL'R DATA PANEL			B 100A-2P	100A		3/2, 1#8G.	
2	SPACE			B 200A				
3	STAGE PANEL	120/240		B 400A-2P	225A		3/4/0, 1#4G.	
4	SPACE			B 200A				
5	SPACE			B 200A				

FIRST LINE	SECOND LINE	THIRD LINE
DLP-3	120/240V, 1# 3W.	LIGHTING & RECEPTACLES

PANEL TYPE	DISTRIBUTION
PANEL LOCATION	BASEMENT
PANEL MOUNTING	SURFACE
SYSTEM & USE	LIGHTING & RECEPTACLES
VOLTAGE/PHASE/WIRE	120/240V, 1# 3W. FULL SIZE NEUTR.
MAIN BUS RATING	400A
MAIN DEVICE	NONE
MIN. S.C.C. RATING SYM.	22,000 MIN. SYM. RMS.
TOTAL CONNECTED LOAD	19 KW
FEEDER SIZE	3#500KCMIL, 1#1/0G.
UNIT FED FROM	UTILITY MAIN

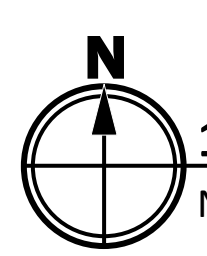


- NOTE:
- WIRE SIZE NOTED IN SCHEDULES ARE ASSUMED SIZES OF EXISTING CONDITIONS AND EXISTING CIRCUIT BREAKER TRIP SETTINGS.
 - WIRE AND BREAKER TRIP SIZE SHALL BE REVISED TO MATCH EXISTING CONDITION.
 - (A) EXISTING CIRCUIT FOR MOTOR LOADS OR PANELBOARDS TO BE INTERCEPTED AND WIRING TRANSFERRED TO NEW DISTRIBUTION PANEL THROUGH NEW WIREWAY.
 - PANEL DESIGN BASED ON CUTLER HAMMER POW-R-LINE-4.



- NEMA #1 ENCLOSURE, GASKETED, HINGED LOCKABLE DOOR, WITH WIRING TERMINAL BLOCK MOUNTED IN INTERIOR.
 - STOP-START SELECTOR SWITCH MOUNTED THROUGH ENCLOSURE DOOR, OIL TIGHT, 240 VOLT RATED.
 - PLASTIC LAMINATED NAMEPLATE-BLACK FACE, 3/8" HIGH WHITE LETTERS. NAMEPLATE DESCRIPTION AS FOLLOWS:
 - (3A) FAN #12-EXHAUST FAN, GIRLS SHOWER ROOM
 - (3B) FAN #1-UNIT VENT. FAN GYM
 - (3C) FAN #8-EXHAUST FAN, BOYS SHOWER ROOM
 - (3D) FAN #7-EXHAUST FAN, WEST REST ROOMS
 - INTERCEPT EXISTING WIRING AND EXTEND TO THIS CONTROL STATION AND CONNECT TO NEW SWITCHES
- EXISTING FANS TO BE RECONNECTED TO THIS CONTROL STATION
- LOCATE AT EXISTING SWITCHBOARD ROOM
- DETAIL FOR FAN CONTROL STATION ENCLOSURE
N.T.S.

**EXISTING ELECTRICAL PLANS
FOR REFERENCE ONLY
(NO SCALE)
FIELD VERIFY INFORMATION**



PROJECT TITLE:

**GARRETT MORGAN
ACADEMY
HVAC UPGRADES
2018**

4016 Woodbine Ave.
Cleveland, OH 44113



PROJECT NUMBER: 80511
DATE DRAWN: 5/10/2017
BY: LSH

#	REVISION	DATE
1	FOR BID	2/2/18
2	---	---
3	---	---
4	---	---
5	---	---

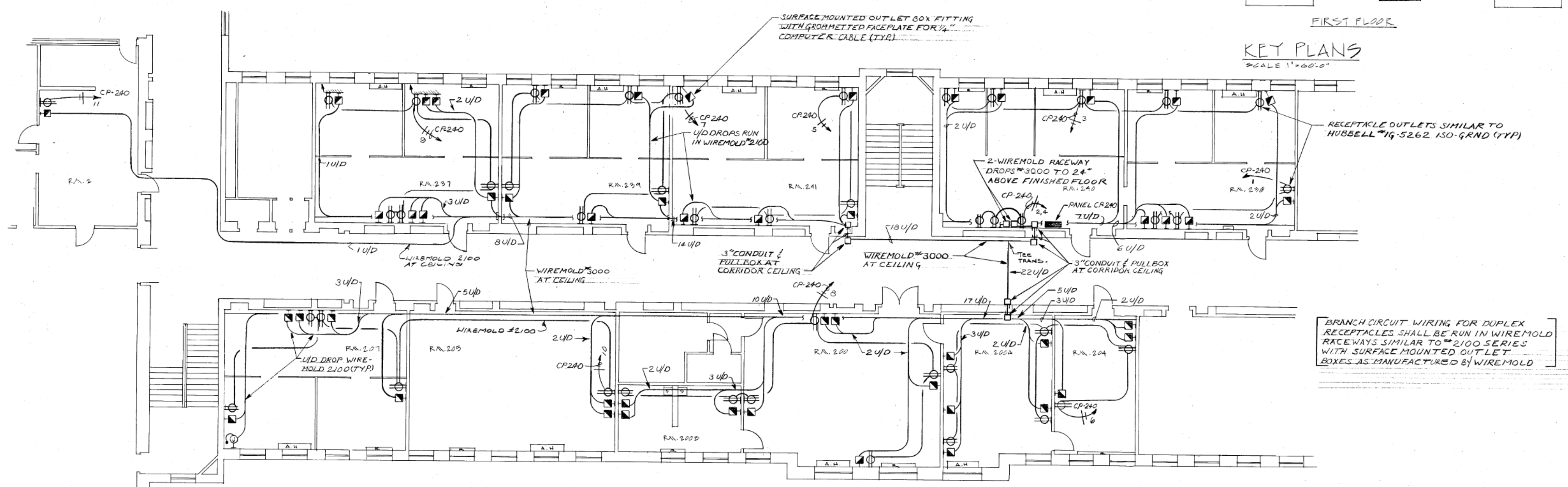
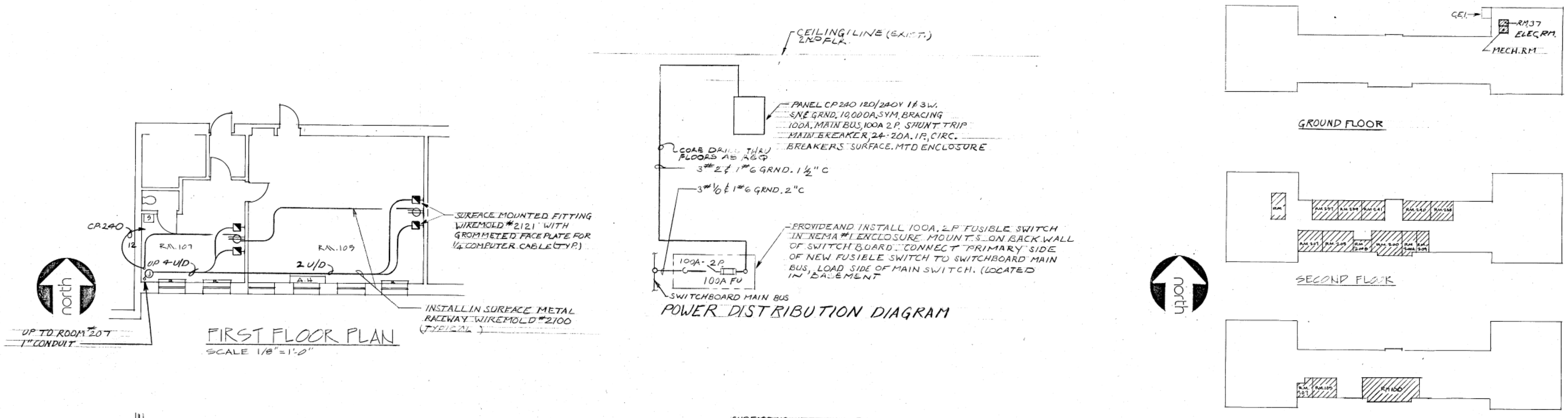
SCALE: AS NOTED

DRAWING TITLE:

**EXISTING
1ST & 2ND FL
POWER
RECEPTICLE
PLAN**

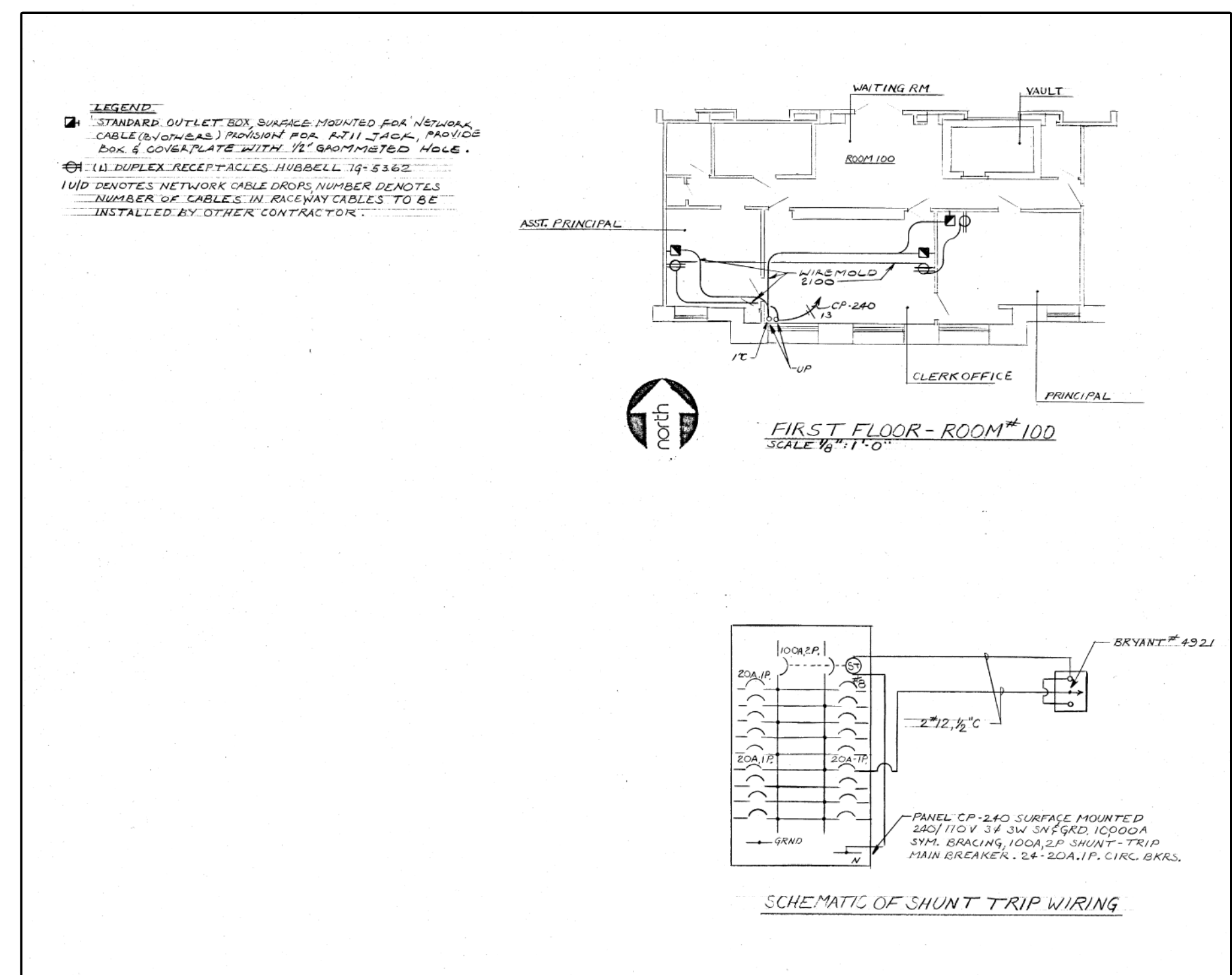
DRAWING NUMBER:

E-07



LEGEND
A.H. - AIR HANDLER
R - RADIATOR
S - SINK

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



**EXISTING ELECTRICAL PLANS
FOR REFERENCE ONLY
(NO SCALE)
FIELD VERIFY INFORMATION**