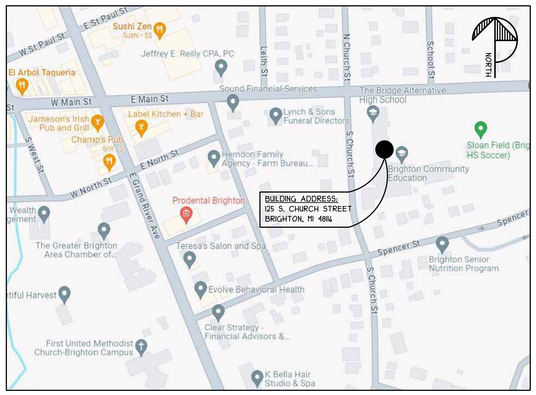
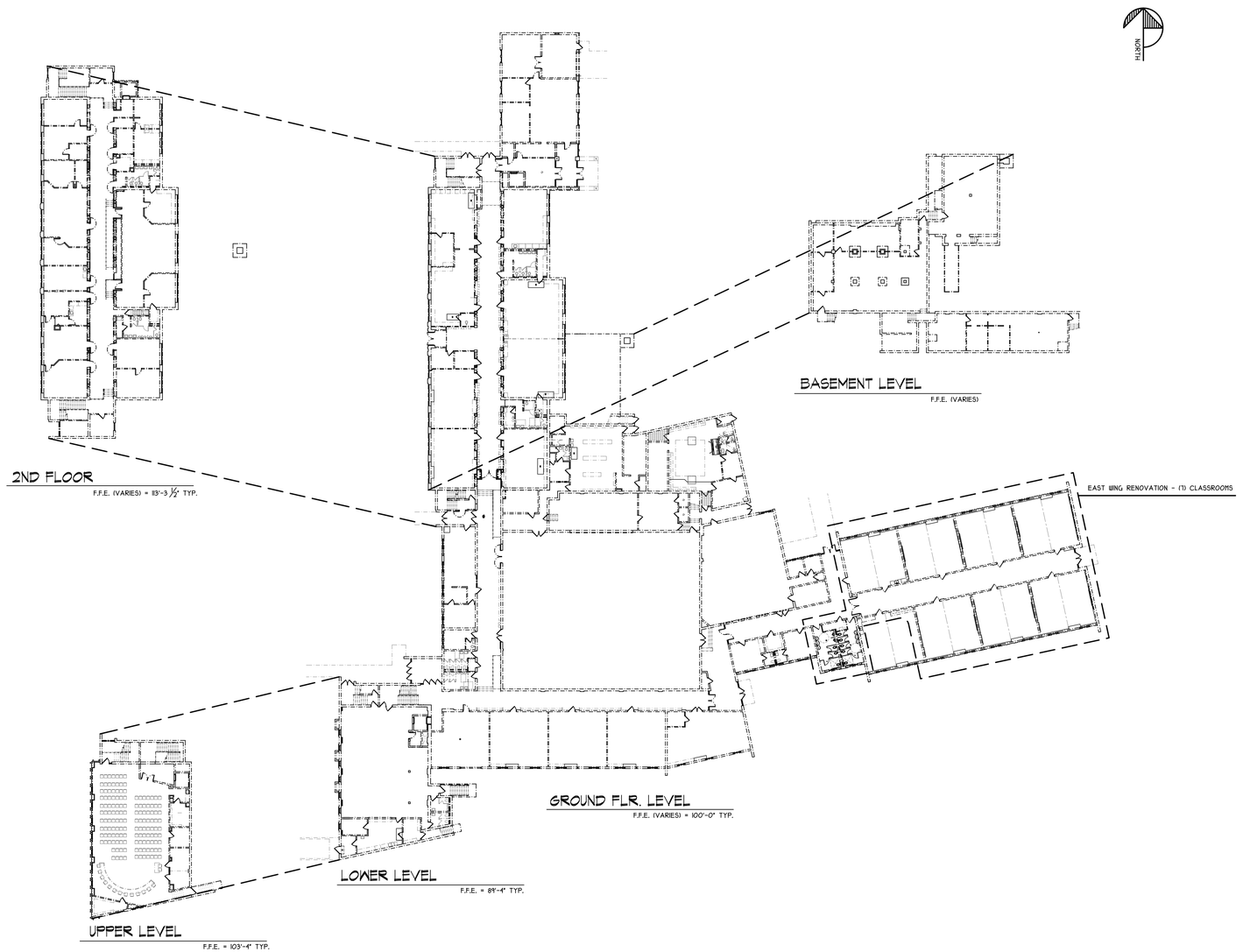
BRIGHTON AREA SCHOOLS - B.E.C.C. BLDG.

MISC. IMPROVEMENTS



LOCATION MAP

NOT TO SCALE



COMPOSITE PLANS

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

PROJECT NARRATIVE

THIS PROJECT CONSISTS OF FIVE COMPONENTS W/IN THE BRIGHTON AREA SCHOOLS B.E.C.C. BUILDING:
1. REMOVE AND REPLACE EXISTING IST FLOOR MECHANICAL UNITS AS NEEDED TO PROVIDE AIR CONDITIONING.
2. REMOVE AND REPLACE EXISTING EXTERIOR WINDOWS THROUGHOUT.
3. REMOVE AND REPLACE EXISTING FIRE ALARM PANEL AND DEVICES.
4. (EAST WING) RENOVATE 1 FORMER CLASSROOMS INTO NEW/UPDATED CLASSROOMS FOR THE DISTRICT.
5. MISCELLANEOUS ROOM RENOVATIONS. GENERAL SCOPE INCLUDES FINISHES AND MEP FIXTURES AS NOTED.

ALTERATIONS DO NOT AFFECT EXISTING EGRESS, OCCUPANCY TYPE, OR OCCUPANT LOAD. EXISTING BUILDING SIZE, CONSTRUCTION TYPE, OR FIRE RATINGS TO REMAIN UNCHANGED AS WELL. THIS WORK IS CLASSIFIED AS LEVEL 2 ALTERATIONS UNDER THE MICHIGAN REHABILITATION CODE, 2015. THE BUILDING IS NON-SPRINKLERED.

APPLICABLE CODES:

2015 MICHIGAN REHABILITATION CODE
2015 MICHIGAN BUILDING CODE
2015 INTERNATIONAL BUILDING CODE
2009 MICHIGAN BARRIER FREE
2012 NFPA 101
2018 MICHIGAN PLUMBING CODE
2015 MICHIGAN MECHANICAL CODE
2015 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE

STATE OF MICHIGAN
D JASON MCINTYRE
ARCHITECT
No. 1301 056404
LICENSED ARCHITECT

BUILDING INFORMATION:

UNCHANGED

FIRE RESISTANCE RATING (UNCHANGED CONSTRUCTION):

UNCHANGED

OCCUPANCY CALCULATIONS (BUSINESS OCCUPANCY):

UNCHANGED

REQUIRED EGRESS COMPONENTS:

UNCHANGED

PLUMBING FIXTURE REQUIREMENTS, PER MICHIGAN LABOR PLUMBING CODE, TABLE 403.1

* (2) EXISTING MULTI-OCCUPANT BATHROOMS PROPOSED RENOVATIONS SHALL REDUCE WATER CLOSET COUNTS BY ONE (1) FIXTURE TO MEET * IMPROVE ADA REQUIREMENTS *

PROJECT INFORMATION

		ISSUANCE			
ARCHITECTURAL & INTERIORS		BIDS & PERMITS	ADD 01	ADD 02	BULL 01
CA	COVER & CODE INFORMATION	X			
D1	DEMO PLANS	X			
D2	ENLARGED DEMO PLANS	X			
A1.1	ENLARGED FLOOR PLANS	X			
A1.2	ENLARGED REFL CLG. PLAN	X			
A2.1	INTERIOR ELEVATIONS & DETAILS	X			
ID100	FINISH PLAN & KEY	X			
ID200	FINISH PLAN, KEY, & BID ALTERNATES	X			
ID400	REFLECTED CEILING PLANS	X			
W1.1	WINDOW REPLACEMENT PLAN - FIRST FLR.	X			
W1.2	WINDOW REPLACEMENT PLAN - 2ND FLR.	X			
W2.1	WINDOW REPLACEMENT EXT. ELEVATIONS.	X			
W2.2	WINDOW REPLACEMENT EXT. ELEVATIONS	X			
PLUMBING					
P1.0	GENERAL PLUMBING INFORMATION	X			
PD1.1	IST FLR. - PLUMBING DEMOLITION PLAN	X			
P1.1	IST FLR. - PLUMBING NEW WORK PLAN	X			
MECHANICAL					
M1.0	MECHANICAL SPECIFICATIONS AND LEGEND	X			
MD1.1	IST FLR. - PARTIAL MECHANICAL DEMO PLAN	X			
MD1.2	IST FLR. - PARTIAL MECHANICAL DEMO PLAN	X			
MD1.3	IST FLR. - PARTIAL MECHANICAL DEMO PLAN	X			
MD1.4	IST FLR. - PARTIAL MECHANICAL DEMO PLAN	X			
M1.1	PARTIAL IST FLR. - MECHANICAL NEW WORK PLAN	X			
M1.2	PARTIAL IST FLR. - MECHANICAL NEW WORK PLAN	X			
M1.3	PARTIAL IST FLR. - MECHANICAL NEW WORK PLAN	X			
M1.4	PARTIAL IST FLR. - MECHANICAL NEW WORK PLAN	X			
M2.1	PARTIAL ROOF - MECHANICAL NEW WORK PLAN	X			
M2.2	PARTIAL ROOF - MECHANICAL NEW WORK PLAN	X			
M2.3	PARTIAL ROOF - MECHANICAL NEW WORK PLAN	X			
M2.4	PARTIAL ROOF - MECHANICAL NEW WORK PLAN	X			
M3.1	MECHANICAL DETAILS	X			
M4.1	MECHANICAL SCHEDULE	X			
M4.2	MECHANICAL SCHEDULE	X			
M4.3	MECHANICAL SCHEDULE	X			
ELECTRICAL					
E0.1	GENERAL ELECTRICAL INFORMATION	X			
E0.2	LIGHTING FIXTURE, CONTROLS SCHEDULE, & NOTES	X			
ED1.1	IST FLR. - ELECTRICAL DEMOLITION PLAN	X			
E1.1	PARTIAL IST FLR. - NEW WORK ELECTRICAL PLAN	X			
E1.2	PARTIAL IST FLR. - NEW WORK ELECTRICAL PLAN	X			
E1.3	PARTIAL IST FLR. - NEW WORK ELECTRICAL PLAN	X			
E1.4	PARTIAL IST FLR. - NEW WORK ELECTRICAL PLAN	X			
E2.1	PARTIAL ROOF PLAN - NEW WORK ELECTRICAL PLAN	X			
E2.2	PARTIAL ROOF PLAN - NEW WORK ELECTRICAL PLAN	X			
E2.3	PARTIAL ROOF PLAN - NEW WORK ELECTRICAL PLAN	X			
E2.4	PARTIAL ROOF PLAN - NEW WORK ELECTRICAL PLAN	X			
E3.1	PARTIAL IST FLR. - NEW WORK LIGHTING PLAN	X			
E4.1	PARTIAL ONE-LINE DIAGRAM & SCHEDULE	X			
E5.1	ELECTRICAL SPECIFICATIONS	X			
E5.2	ELECTRICAL SPECIFICATIONS	X			
FIRE ALARM					
EF0.1	GENERAL ELECTRICAL INFORMATION	X			
EF1.1	PARTIAL IST FLR. - NEW FIRE ALARM SYSTEMS WORK	X			
EF1.2	PARTIAL IST FLR. - NEW FIRE ALARM SYSTEMS WORK	X			
EF1.3	PARTIAL IST FLR. - NEW FIRE ALARM SYSTEMS WORK	X			
EF1.4	PARTIAL IST FLR. - NEW FIRE ALARM SYSTEMS WORK	X			
EF1.5	PARTIAL IST FLR. - NEW FIRE ALARM SYSTEMS WORK	X			
EF2.1	PARTIAL 2ND FLR. - NEW FIRE ALARM SYSTEMS WORK	X			
EF2.2	PARTIAL 2ND FLR. - NEW FIRE ALARM SYSTEMS WORK	X			
EF3.1	ELECTRICAL SPECIFICATIONS	X			
EF3.2	ELECTRICAL SPECIFICATIONS	X			

SHEET INDEX

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com fax:(810)227-5655 (810)227-5688

consultant

dr:	DJM	BIDS & PERMITS
ck'd:	XXX	3/8/2024 OWNER REVIEW
app'd:	XXX	11.30.2023 OWNER REVIEW
		11.2.2023 issued for
		date

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN

COVER

CA

23085

THIS DOCUMENT AND THE SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT PRIOR WRITTEN APPROVAL.
COPYRIGHT © 2023 LINDHOUT ASSOCIATES architects aia pc

FILE LOCATION: C:\LINDHOUT\23084-088 BAS phase 4\23085 Project 2 - BECC East wing reno\dwgs\CD\23085-CA code & cover.dwg
DATE PLOTTED: 3/10/2024 PLOTTED BY: jason mcintyre

ELECTRICAL SYMBOL LIST

POWER SYMBOLS

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE
C	DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE, CEILING MOUNTED RECEPTACLE.
F	FLUSH FLOOR MOUNTED 120V. 20A. CONVENIENCE RECEPTACLE. HUBBELL #B2537 WITH #S3082/S3925 COVER ASSY.
M	MEDIA RECEPTACLE
WP	WEATHERPROOF RECEPTACLE
IG	COMPUTER GRADE RECEPTACLE, 120V. 20A., WITH ISOLATED GROUND
	SWITCHED DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE
	DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE
G	DUPLEX RECEPTACLE, GFCI TYPE,120V. 20A., GROUNDING TYPE
IG	COMPUTER GRADE RECEPTACLE, 120V. 20A. WITH ISOLATED GROUND
	DOUBLE DUPLEX RECEPTACLE, 120V. 20A. GROUNDING TYPE
	DOUBLE DUPLEX RECEPTACLE 120V. 20A. GROUNDING TYPE
	FLUSH FLOOR MOUNTED TELE/DATA OUTLET. HUBBELL #B2537 WITH #S3082/S2925 COVER ASSY. PROVIDE 3/4"C. TO CEILING SPACE.
F	FLUSH FLOOR MOUNTED RECEPTACLE IN NONMETALLIC RECTANGULAR FLOOR BOX WITH 1-1/4" KNOCK-OUTS AND REDUCERS FOR USE WITH 1/2", 3/4" & 1" CONDUITS. PROVIDE WITH BRASS CARPET FLANGE, USE MULTI-GANG WHERE DEVICES ARE SHOWN ADJACENT TO EACH OTHER. PROVIDE BRASS RECTANGULAR COVER PLATE, WITH 120V-20A DUPLEX RECEPTACLE. WIREMOLD 880MP.
F	FLUSH FLOOR MOUNTED DATA OUTLET IN NONMETALLIC RECTANGULAR FLOOR BOX WITH 1-1/4" KNOCK-OUTS AND REDUCERS FOR USE WITH 1/2", 3/4" & 1" CONDUITS. PROVIDE WITH BRASS CARPET FLANGE, USE MULTI-GANG WHERE DEVICES ARE SHOWN ADJACENT TO EACH OTHER. PROVIDE BRASS GFI COVER PLATE, WITH COMMUNICATIONS MOUNTING PLATE. WIREMOLD 880MP.
F	FLUSH FLOOR MOUNTED POWER/DATA OUTLET. HUBBELL #B4233 CAST IRON FLOOR BOX WITH #S3825 FLUSH COVER FOR POWER AND #S2825 FLUSH COVER PLATE FOR TELE/DATA. PROVIDE 120V. 20A DUPLEX RECEPTACLE.
	LEGRAND #EFB45 FLOOR BOX WITH TWO 120V. 20A. DUPLEX RECEPTACLES ON ONE SIDE AND ONE DATA DEVICE PLATE AND ONE AV DEVICE PLATE WITH ON THE OPPOSITE SIDE.
A	LEGRAND #EFB45 FLOOR BOX WITH FOUR 120V. 20A. DUPLEX RECEPTACLES ON ONE SIDE AND ONE DATA DEVICE PLATE WITH 3 CAT6 CONNECTORS, AND ONE AV DEVICE PLATE WITH TWO-MDMI CONNECTORS ON THE OPPOSITE SIDE.
	SPECIAL RECEPTACLE, TYPE & MOUNTING HEIGHT AS NOTED

POWER SYMBOLS

SYMBOL	DESCRIPTION
C	JUNCTION BOX - CEILING MOUNTED
F	JUNCTION BOX - FLOOR MOUNTED
	JUNCTION BOX - WALL MOUNTED, HEIGHT AS NOTED
M	KWH METER
BF	BASE FEED TO SYSTEM FURNITURE WITH POWER, TELEPHONE AND DATA CONNECTIONS TO CEILING SPACE
BF F	FLOOR MOUNTED BASE FEED TO SYSTEM FURNITURE WITH POWER, TELEPHONE AND DATA CONNECTIONS TO CEILING SPACE
P/P	(2) SECTION TELE / POWER POLE TO SYSTEM FURNITURE WITH POWER, TELEPHONE AND DATA CONNECTIONS TO CEILING SPACE
	WALL MOUNTED SURFACE METAL RACE WAY
30 100	FUSIBLE DISCONNECT SWITCH - UPPER NUMERAL DENOTES SWITCH SIZE, LOWER NUMERAL DENOTES FUSE SIZE
30	NON-FUSED DISCONNECT SWITCH - NUMERAL DENOTES SWITCH SIZE
	MAGNETIC MOTOR STARTER
	COMBINATION MOTOR STARTER
SMP	MOTOR CONTROL SWITCH WITH PILOT LIGHT
SM	MANUAL MOTOR STARTER, OR ON MOTORIZED EQUIP.
	MOTOR CONNECTION
	LOAD CENTER
	LIGHTING PANELBOARD
	POWER PANELBOARD
	DISTRIBUTION PANELBOARD
	MAIN SWITCHBOARD
T	TRANSFORMER
	CONTROL PANEL
	CEILING FAN

LOW VOLTAGE SYMBOLS

SYMBOL	DESCRIPTION
D	DATA OUTLET
PR	PROXIMITY READER OUTLET
K	KEY SWITCH
TV	TELEVISION OUTLET BOX

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION
S	SINGLE POLE TOGGLE SWITCH
S3	THREE-WAY TOGGLE SWITCH
S4	FOUR-WAY TOGGLE SWITCH
SK	KEY OPERATED SWITCH
SD	WALL DIMMER, DIMMING TECHNOLOGY AS REQUIRED, WATTAGE REQUIRED EQUAL TO CONNECTED LOAD PLUS 25 PERCENT
SP	SWITCH WITH PILOT LIGHT
	RECESSED TROFFER
	EMERGENCY LIGHT
	SURFACE MOUNTED LIGHT
	RECESSED TROFFER
	EMERGENCY LIGHT
	SURFACE MOUNTED LIGHT
H	WALL MOUNTED LUMINAIRE, HEIGHT AS NOTED
	SURFACE MOUNTED LIGHT FIXTURE
	PENDANT MOUNTED LIGHT FIXTURE
	RECESSED DOWNLIGHT
	STRIP LIGHT
	SINGLE FACE EXIT SIGN, CEILING MTD. ARROWS AS INDICATED
	DOUBLE FACE EXIT SIGN, CEILING MTD. ARROWS AS INDICATED
	SINGLE FACE EXIT SIGN, WALL MTD. ARROWS AS INDICATED
	DOUBLE FACE EXIT SIGN, WALL MTD. ARROWS AS INDICATED
	BATTERY OPERATED EMERGENCY LIGHT
	COMBINATION EXIT / EMERGENCY LIGHT
	REMOTE EMERGENCY LIGHT
	TWIN HEAD REMOTE EMERGENCY LIGHT
	SITE LIGHTING BOLLARD
	OUTDOOR LIGHTING POLE & LUMINAIRE

FIRE ALARM & EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SYMBOLS

SYMBOL	DESCRIPTION
F	FIRE ALARM MANUAL PULL STATION +48" A.F.F.
F	FIRE ALARM SPEAKER/STROBE COMBINATION DEVICE +80" A.F.F.
V	FIRE ALARM VISUAL DEVICE +80" A.F.F.
S	FIRE ALARM SPEAKER AT CEILING
S	FIRE ALARM SPEAKER ON WALL +108" A.F.F.
H	DOOR HOLD OPEN DEVICE
H	HEAT DETECTOR
S	SMOKE DETECTOR
FACP	FIRE ALARM CONTROL PANEL
F.A.A.N.	FIRE ALARM REMOTE ANNUNCIATOR

PROJECT SPECIFIC NOTES

1. APPLICABLE CODES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, THE FOLLOWING:
   - 1.1. 2015 MICHIGAN BUILDING CODE
   - 1.2. 2017 NEC WITH MICHIGAN PART 8 AMENDMENTS (INCLUDING NEC ART. 708)
   - 1.3. NEC ARTICLE 708 - CRITICAL OPERATIONS POWER SYSTEMS
   - 1.4. 2017 MICHIGAN ENERGY CODE (IECC 2015 / ASHRAE 90.1 - 2013)
   - 1.5. 2009 ICC ANSI STANDARD A117.1-2009
   - 1.6. 2015 INTERNATIONAL FIRE CODE
   - 1.7. 2016 NFPA 1221 - STANDARD FOR INSTALLATION, MAINTENANCE AND USE OF EMERGENCY COMMUNICATIONS SYSTEMS
   - 1.8. 2013 NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE
   - 1.9. 2013 NFPA 110 - STANDARD FOR EMERGENCY AND STANDBY POWER SYSTEMS.
2. OVERCURRENT PROTECTIVE DEVICES SERVING EMERGENCY SYSTEMS SHALL BE SELECTIVELY COORDINATED WITH ALL SUPPLY-SIDE OVERCURRENT PROTECTIVE DEVICES.
3. A SHORT-CIRCUIT, ARC-FLASH AND OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY SHALL BE PROVIDED BY THE CONTRACTOR AT THE SAME TIME SUBMITTALS ARE PREPARED.
4. CONTRACTOR SHALL PROVIDE NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT AND ARC-FLASH LABELS INDICATING REQUIRED PPE PROTECTION.
5. ALL WIRING AND BUSSING SHALL BE COPPER, UNLESS OTHERWISE NOTED.
6. SURGE PROTECTION DEVICES SHALL BE PROVIDED WHERE INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS. SURGE PROTECTION DEVICES SHALL BE COMPATIBLE WITH THE LIGHTNING PROTECTION SYSTEM AND SHALL INCLUDE SURGE COUNTERS AND PROVISIONS FOR REMOTE MONITORING. ROUTE LOW-VOLTAGE CABLE FOR MONITORING BACK TO SERVER ROOM.
7. A SEPARATE EQUIPMENT GROUNDING CONDUCTORS, SIZED PER NEC, SHALL BE INSTALLED WITH ALL CIRCUIT CONDUCTORS.
8. PROVIDE A THERMAL-ADHESIVE LABEL ON EACH DEVICE (LIGHT SWITCH, RECEPTACLE, ETC.) INDICATING THE SOURCE PANEL AND CIRCUIT NUMBER.

GENERAL NOTES

1. THE CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND/OR LOCAL CODES. IF A DISCREPANCY BETWEEN CODES OCCURS, THE MOST STRINGENT SHALL PREVAIL.
2. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY WORK. SHOULD DISCREPANCIES BE DISCOVERED, THE CONTRACTOR SHALL VERIFY INTENT WITH THE ENGINEER/OWNER BEFORE PROCEEDING.
3. COORDINATE LOCATIONS OF ALL CEILING MOUNTED DEVICES WITH OTHER TRADES PRIOR TO INSTALLATION.
4. COORDINATE ALL ROUGH-IN REQUIREMENTS FOR OWNER FURNISHED EQUIPMENT WITH THE OWNER PRIOR TO BEGINNING WORK. THESE DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE DURING THE DESIGN PHASE OF THE PROJECT.
5. COORDINATE WITH MILLWORK CONTRACTOR TO DETERMINE THE EXACT LOCATION OF OUTLETS BEING PLACED IN MILLWORK.
6. ALL DEVICES ARE TO BE FLUSH MOUNTED UNLESS NOTED OTHERWISE.
7. DEVICES NOTED "GFI" SHALL INCLUDE GROUND FAULT INTERRUPTING DEVICES.
8. DEVICES NOTED "WP" SHALL BE WEATHERPROOF, "WHILE-IN-USE" TYPE WHERE APPLICABLE.
9. DEVICES NOTED "NL" SHALL BE NIGHT LIGHTS. PROVIDE UN-SWITCHED BRANCH CIRCUIT CONDUCTORS TO EACH FIXTURE.
10. CONNECT ALL EXIT AND EMERGENCY LIGHTING FIXTURES TO LOCAL LIGHTING CIRCUIT, AHEAD OF ALL SWITCHES, PER NEC.
11. ACTUAL CONDUIT SIZE AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM NICET CERTIFIED DESIGNER.
12. THE ELECTRICAL CONTRACTOR SHALL HIRE A NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER TO DESIGN THE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.
13. THE DRAWINGS INDICATE ASSUMED LOCATIONS OF DEVICES AND SUGGESTED CONDUIT ROUTING DIAGRAMS ON THE PLANS. A FIRE ALARM NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER SHALL DETERMINE THE ACTUAL DEVICE TYPES AND THEIR LOCATIONS, OUTPUT AND THE ROUTING OF ALL RACEWAYS.
14. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND DESCRIPTION OF SYSTEM.
15. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE ALARM DEVICES.
16. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER ANSI 117.1 AND NFPA 72.
17. THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SHALL PROVIDE FULL INTELLIGIBILITY THROUGHOUT THE AREA.
18. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
19. ALL FIRE ALARM WIRING SHALL COMPLY WITH NFPA 70., ARTICLE 760.
20. ALL MOUNTING HEIGHTS PROVIDED ARE TO CENTER OF DEVICE, UNLESS OTHERWISE INDICATED.

GENERAL NOTES - DEMOLITION

1. CERTAIN AREAS IN THE EXISTING BUILDING SHALL BE MODIFIED TO SUIT THE NEW REQUIREMENTS. THESE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO INDICATE THE SCOPE OF WORK REQUIRED TO COMPLETE A SAFE REMOVAL OF THE ELECTRICAL SYSTEMS AS INDICATED BY THE NOTES ON THIS DRAWING.
2. WORK IN THE AREA SHALL INCLUDE THE DISCONNECTION, REMOVAL, RELOCATION, AND RECONNECTION COMPLETE IN ALL RESPECTS OF ALL ITEMS REQUIRED TO SUIT THE DESIGN INTENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE PROJECT SITE TO CORRECTLY ASCERTAIN THE SCOPE OF SERVICES AND TO INCLUDE ALL PERTINENT COSTS IN HIS BID. NO EXTRAS WILL BE ALLOWED.
3. ALL ELECTRICAL WORK INTERFERING WITH AND REQUIRING MODIFICATION FOR THE NEW REQUIREMENTS SHALL BE RELOCATED AS DIRECTED BY BUILDING MANAGEMENT PERSONNEL AND REINSTALLED AND REWIRED AS NECESSARY TO THE SATISFACTION OF THE BUILDING OWNER.
4. PROVIDE ALL EQUIPMENT, MATERIALS, LABOR AND SUPERVISION NECESSARY TO PROVIDE A SAFE ELECTRICAL INSTALLATION. ALL ELECTRICAL DEVICES AND SYSTEMS THAT ARE INDICATED AS EXISTING TO REMAIN SHALL BE IN SAFE WORKING ORDER.
5. OBTAIN NECESSARY PERMITS FROM THE LOCAL AUTHORITY HAVING JURISDICTION BEFORE PROCEEDING WITH ANY WORK IN THE FIELD.
6. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, OSHA AND OTHER ELECTRICAL SAFETY STANDARDS AND GUIDELINES. CONFORM TO ALL STATE AND LOCAL CODES AND STANDARDS.
7. ALL EQUIPMENT AND WIRING NOT IN RENOVATION AREAS BUT AFFECTED BY WORK IN RENOVATION AREAS SHALL BE RECONNECTED AS REQUIRED FOR A COMPLETE WORKING SYSTEM.
8. ABANDONED AND INACTIVE CONDUITS, WIRE, DEVICES, EQUIPMENT, ETC., SHALL BE REMOVED IN THEIR ENTIRETY. IN ADDITION TO THESE ITEMS, THIS CONTRACTOR SHALL REMOVE ALL ITEMS AS INDICATED ON THE PLANS, OR AS REQUIRED TO CLEAN UP THE ENTIRE AREA OF UNUSED, ABANDONED, OR INACTIVE MATERIALS. CONDUIT AND WIRING FEEDING DEVICES AND EQUIPMENT TO BE REMOVED SHALL ALSO BE REMOVED UP TO THE NEXT ACTIVE PULLBOX, JUNCTION BOX, OR PANELBOARD. HANGERS, MESSENGER CABLE, BRACKETS, ETC. SUPPORTING ITEMS TO BE REMOVED SHALL ALSO BE UNFASTENED AND REMOVED. OPEN HOLES IN DUCTS, BOXES, PANELBOARDS, AND KNOCKOUTS SHALL BE CLOSED WITH SUITABLE SNAP PLUGS OR FILLER PLATES.
9. THE CONTRACTOR SHALL REMOVE AND DELIVER TO A PLACE DESIGNATED BY THE OWNER ALL EXISTING ELECTRICAL EQUIPMENT NO LONGER INTENDED FOR USE. THIS EQUIPMENT REMAINS THE PROPERTY OF THE OWNER.
10. ANY EQUIPMENT, DEVICES, MATERIALS, ETC., THE OWNER ELECTS NOT TO RETAIN SHALL BE LEGALLY DISPOSED OF BY THE CONTRACTOR OFF THE OWNER'S PREMISES.
11. AT COMPLETION OF ALL ELECTRICAL WORK, UPDATE CIRCUIT DIRECTORIES IN PANELS AFFECTED BY NEW WORK WITH NEW TYPEWRITTEN CIRCUIT DESCRIPTIONS. CIRCUIT DIRECTORIES SHALL BE MOUNTED ON INSIDE OF FRONT PANEL COVER IN A CLEAR PLASTIC ENCLOSURE.
12. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND IN ACCORDANCE WITH THEIR LISTING OR LABELING REQUIREMENTS. ANY PENETRATIONS THROUGH FIRE RATED ASSEMBLIES THAT ARE CREATED BY THE ELECTRICAL DEMOLITION, SHALL BE SEALED AND RESTORED IN ACCORDANCE WITH THE UL FIRE RESISTANCE DIRECTORY.
13. WHERE CONDUIT AND/OR OUTLET BOXES INDICATED FOR DEMOLITION ARE EMBEDDED IN CONCRETE OR BELOW CONCRETE SLAB, ABANDON IN PLACE. CUT BACK AND SEAL EXPOSED CONDUIT. PROVIDE BLANK COVERS FOR ABANDONED BOXES. REMOVE ALL ASSOCIATED WIRING BACK TO SOURCE.

STATE OF MICHIGAN
JORDAN KOENIG
ENGINEER
No. 6201059789
LICENSED PROFESSIONAL ENGINEER
03/08/24

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

mechanical electrical engineering consultants pc
14456 Sheldon Rd., Ste. 250
Plymouth, MI 48170
T 734-464-5515
F 734-464-5516
MEEC JOB # 23-0133

BIDS & PERMITS issued for
03/08/2024 date
dr: D.P. ck'd: J.E. app'd: J.K.

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
GENERAL ELECTRICAL INFORMATION

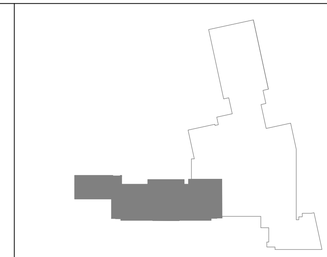
EF0.1
23086

1 EF0.1 GENERAL ELECTRICAL INFORMATION

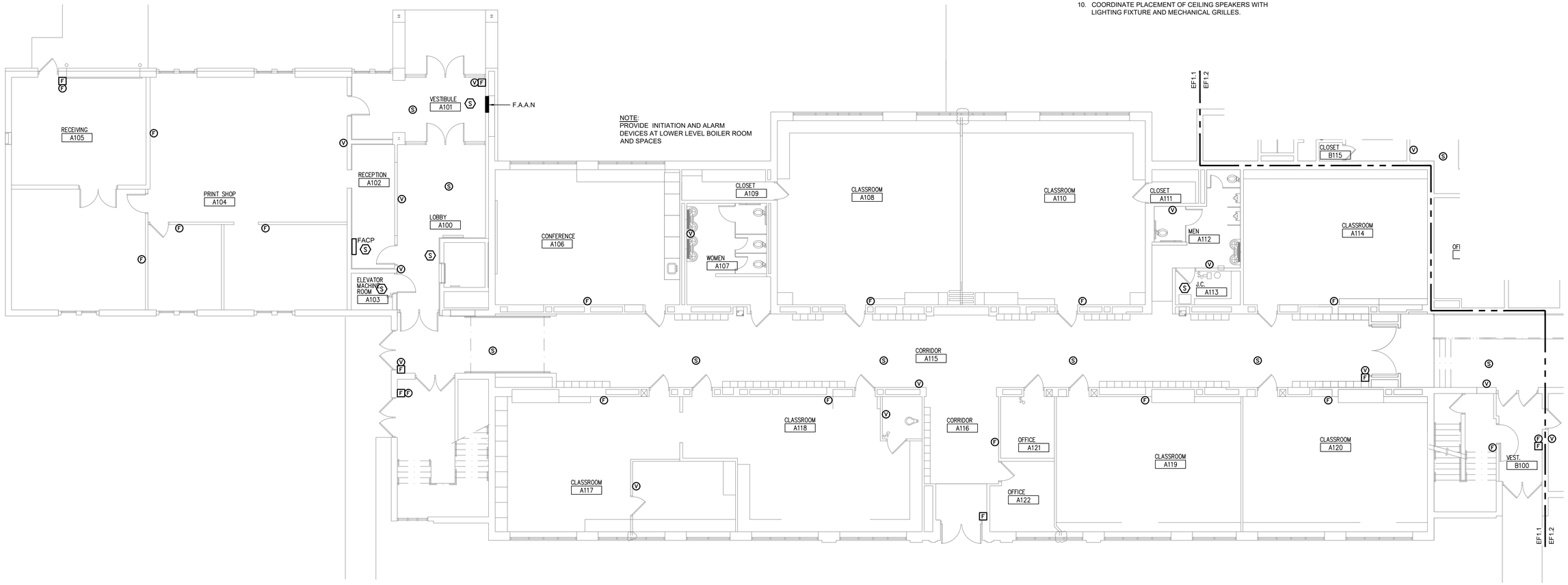
SCALE: NONE

BUILDING FIRE ALARM NOTES:

1. ACTUAL CONDUIT SIZE AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM NICET CERTIFIED DESIGNER.
2. THE ELECTRICAL CONTRACTOR SHALL HIRE A NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER TO DESIGN THE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.
3. THE DRAWINGS INDICATE ASSUMED LOCATIONS OF DEVICES AND SUGGESTED CONDUIT ROUTING DIAGRAMS ON THE PLANS. A FIRE ALARM NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER SHALL DETERMINE THE ACTUAL DEVICE TYPES AND THEIR LOCATIONS, OUTPUT AND THE ROUTING OF ALL RACEWAYS.
4. REFER TO SPECIFICATIONS SECTION 28 31 11 - DIGITAL ADDRESSABLE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM FOR ADDITIONAL REQUIREMENTS AND DESCRIPTION OF SYSTEM.
5. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE ALARM DEVICES.
6. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER ANSI 117.1 AND NFPA 72.
7. THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SHALL PROVIDE FULL INTELLIGIBILITY THROUGHOUT THE AREA.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
9. ALL FIRE ALARM WIRING SHALL COMPLY WITH NFPA 70., ARTICLE 760.
10. COORDINATE PLACEMENT OF CEILING SPEAKERS WITH LIGHTING FIXTURE AND MECHANICAL GRILLES.



1 EF1.1 KEY PLAN



STATE OF MICHIGAN
JORDAN KOENIG
ENGINEER
No. 6201059789
LICENSED PROFESSIONAL ENGINEER
03/08/24

NORTH

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

1 EF1.1 PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

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

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

mechanical electrical engineering consultants pc
MEEC
14496 Sheldon Rd., Ste. 250
Plymouth, MI 48170
P 734-464-6616
F 734-464-6617
MEEC JOB # 22-0133

BIDS & PERMITS issued for

dr: D.P.		
ck'd: J.E.		03/08/2024
app'd: J.K.		date

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

EF1.1

23086

1 EF1.2 KEY PLAN

BUILDING FIRE ALARM NOTES:

1. ACTUAL CONDUIT SIZE AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM NICET CERTIFIED DESIGNER.
2. THE ELECTRICAL CONTRACTOR SHALL HIRE A NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER TO DESIGN THE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.
3. THE DRAWINGS INDICATE ASSUMED LOCATIONS OF DEVICES AND SUGGESTED CONDUIT ROUTING DIAGRAMS ON THE PLANS. A FIRE ALARM NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER SHALL DETERMINE THE ACTUAL DEVICE TYPES AND THEIR LOCATIONS, OUTPUT AND THE ROUTING OF ALL RACEWAYS.
4. REFER TO SPECIFICATIONS SECTION 28 31 11 - DIGITAL ADDRESSABLE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM FOR ADDITIONAL REQUIREMENTS AND DESCRIPTION OF SYSTEM.
5. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE ALARM DEVICES.
6. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER ANSI 117.1 AND NFPA 72.
7. THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SHALL PROVIDE FULL INTELLIGIBILITY THROUGHOUT THE AREA.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
9. ALL FIRE ALARM WIRING SHALL COMPLY WITH NFPA 70., ARTICLE 760.
10. COORDINATE PLACEMENT OF CEILING SPEAKERS WITH LIGHTING FIXTURE AND MECHANICAL GRILLES.

STATE OF MICHIGAN
JORDAN KOENIG
ENGINEER
No. 6201059789
LICENSED PROFESSIONAL ENGINEER
03/08/24

NORTH

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

1 EF1.2 PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

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

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

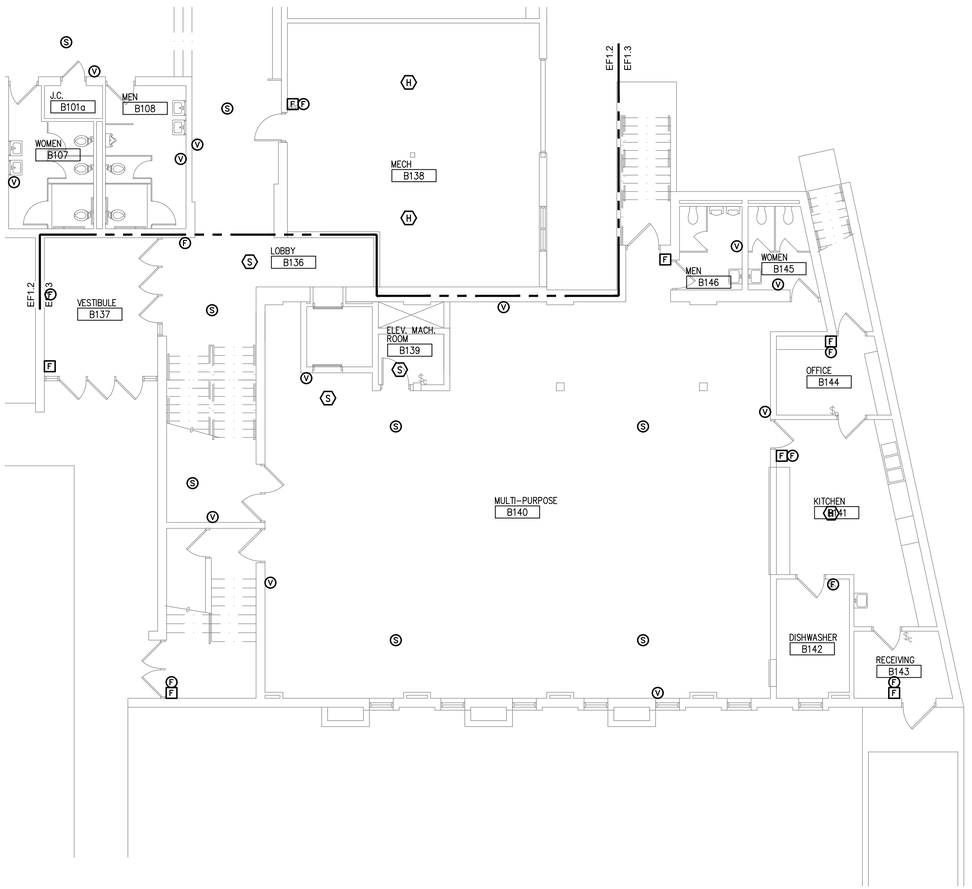
mechanical electrical engineering consultants pc
14466 Sheldon Rd. Ste. 260
Plymouth, MI 48170
734-464-6818
F 734-464-6819
MEEC JOB # 23-013

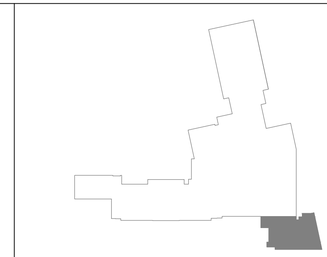
		BIDS ♦ PERMITS issued for
dr: D.P.		
ck'd: J.E.	03/08/2024	
app'd: J.K.	date	

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

EF1.2

23086





1 EF1.3 KEY PLAN

BUILDING FIRE ALARM NOTES:

1. ACTUAL CONDUIT SIZE AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM NICET CERTIFIED DESIGNER.
2. THE ELECTRICAL CONTRACTOR SHALL HIRE A NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER TO DESIGN THE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.
3. THE DRAWINGS INDICATE ASSUMED LOCATIONS OF DEVICES AND SUGGESTED CONDUIT ROUTING DIAGRAMS ON THE PLANS. A FIRE ALARM NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER SHALL DETERMINE THE ACTUAL DEVICE TYPES AND THEIR LOCATIONS, OUTPUT AND THE ROUTING OF ALL RACEWAYS.
4. REFER TO SPECIFICATIONS SECTION 28 31 11 - DIGITAL ADDRESSABLE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM FOR ADDITIONAL REQUIREMENTS AND DESCRIPTION OF SYSTEM.
5. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE ALARM DEVICES.
6. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER ANSI 117.1 AND NFPA 72.
7. THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SHALL PROVIDE FULL INTELLIGIBILITY THROUGHOUT THE AREA.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
9. ALL FIRE ALARM WIRING SHALL COMPLY WITH NFPA 70., ARTICLE 760.
10. COORDINATE PLACEMENT OF CEILING SPEAKERS WITH LIGHTING FIXTURE AND MECHANICAL GRILLES.

STATE OF MICHIGAN
JORDAN KOENIG
ENGINEER
No. 6201059789
LICENSED PROFESSIONAL ENGINEER
03/08/24

NORTH

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

1 EF1.3 PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

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

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

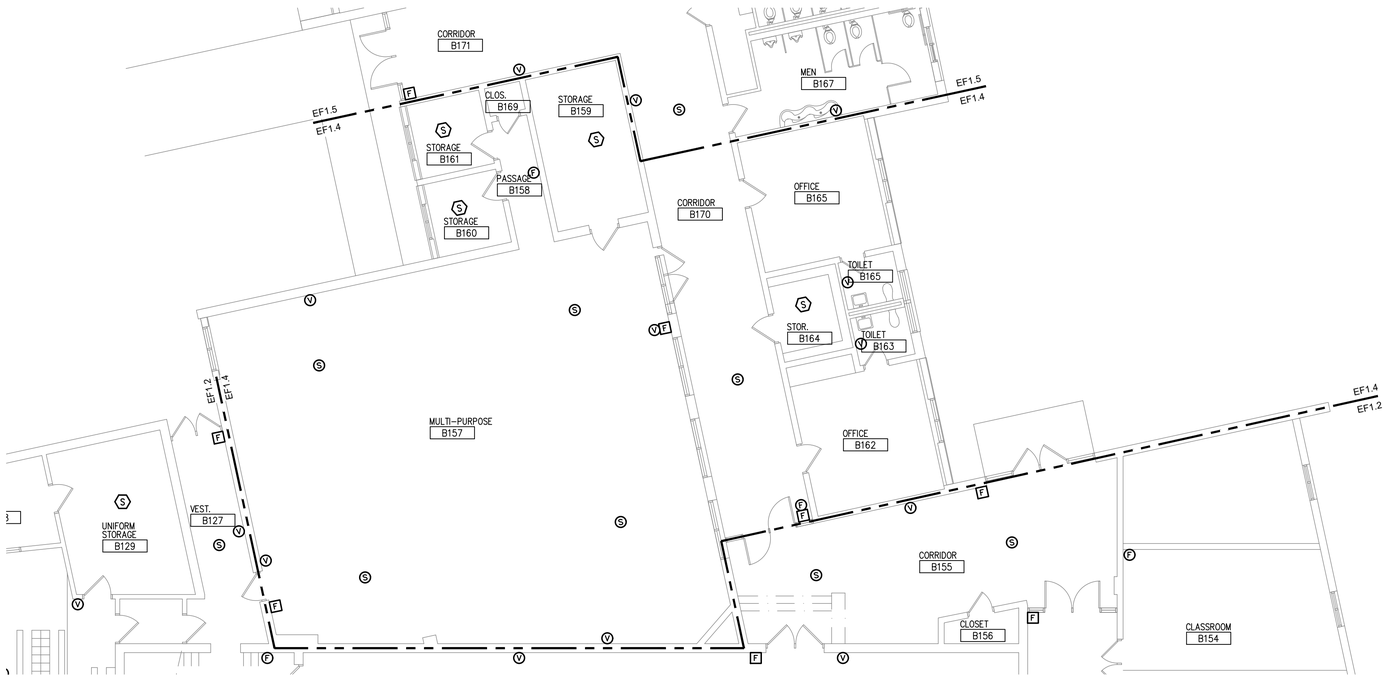
mechanical electrical engineering consultants pc
MEEC
14466 Sheldon Rd., Ste. 260
Plymouth, MI 48170
P 734-464-4811
F 734-464-4818
MEEC JOB # 23-0133

dr: D.P.		BIDS & PERMITS issued for
ck'd: J.E.		
app'd: J.K.	03/08/2024 date	

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

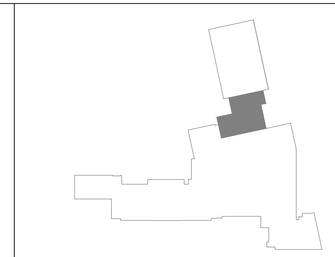
EF1.3

23086



1 EF1.4 PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

SCALE: NONE



1 EF1.4 KEY PLAN

BUILDING FIRE ALARM NOTES:

1. ACTUAL CONDUIT SIZE AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM NICET CERTIFIED DESIGNER.
2. THE ELECTRICAL CONTRACTOR SHALL HIRE A NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER TO DESIGN THE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.
3. THE DRAWINGS INDICATE ASSUMED LOCATIONS OF DEVICES AND SUGGESTED CONDUIT ROUTING DIAGRAMS ON THE PLANS. A FIRE ALARM NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER SHALL DETERMINE THE ACTUAL DEVICE TYPES AND THEIR LOCATIONS, OUTPUT AND THE ROUTING OF ALL RACEWAYS.
4. REFER TO SPECIFICATIONS SECTION 28 31 11 - DIGITAL ADDRESSABLE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM FOR ADDITIONAL REQUIREMENTS AND DESCRIPTION OF SYSTEM.
5. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE ALARM DEVICES.
6. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER ANSI 117.1 AND NFPA 72.
7. THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SHALL PROVIDE FULL INTELLIGIBILITY THROUGHOUT THE AREA.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
9. ALL FIRE ALARM WIRING SHALL COMPLY WITH NFPA 70., ARTICLE 760.
10. COORDINATE PLACEMENT OF CEILING SPEAKERS WITH LIGHTING FIXTURE AND MECHANICAL GRILLES.

STATE OF MICHIGAN
JORDAN KOENIG
ENGINEER
No. 6201059789
REGISTERED PROFESSIONAL ENGINEER
03/08/24

NORTH

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

mechanical electrical engineering consultants pc
MEEC
14466 Sheldon Rd., Ste. 250
Plymouth, MI 48170
P 734-464-6616
F 734-464-6617
MEEC JOB # 23-013

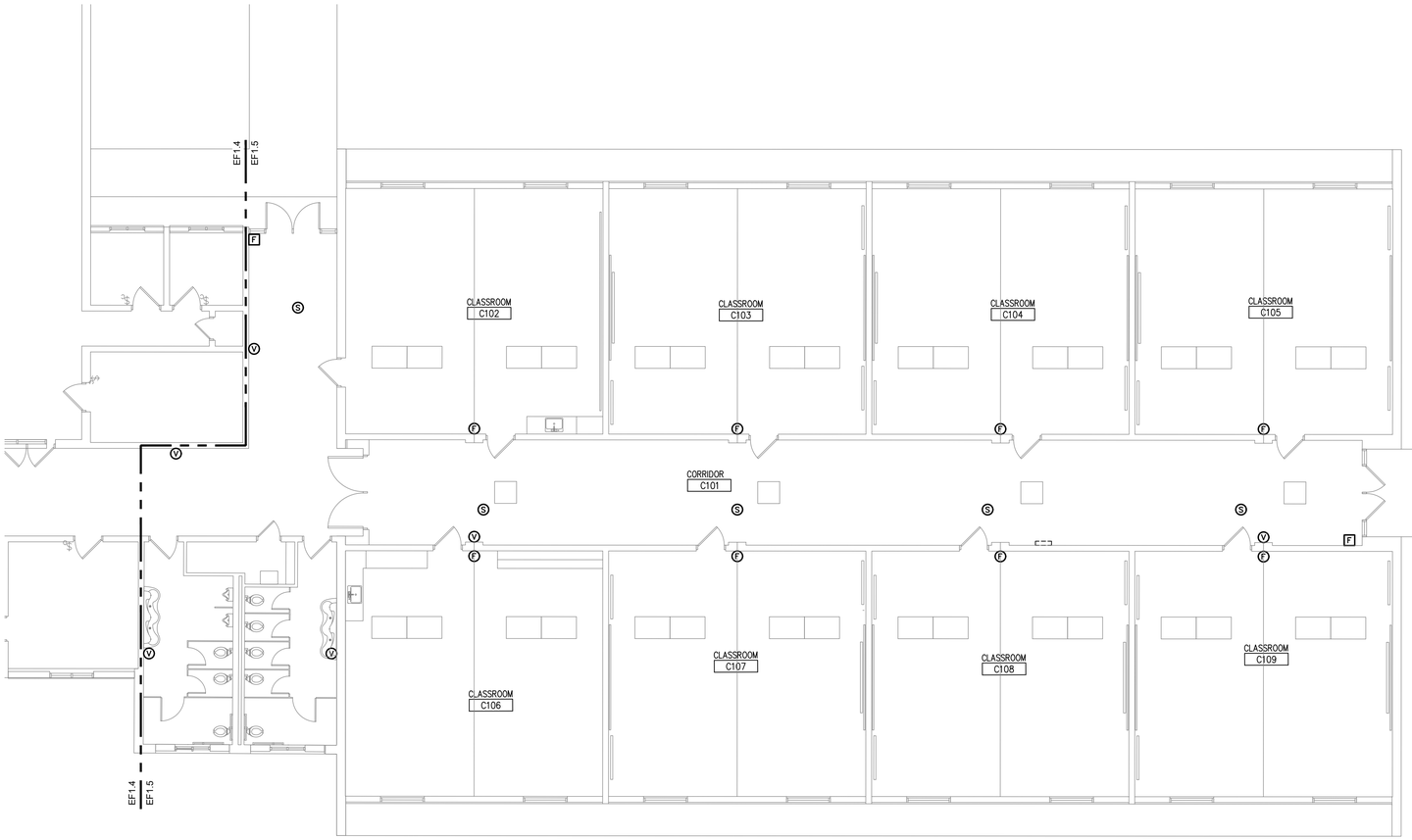
BIDS & PERMITS issued for

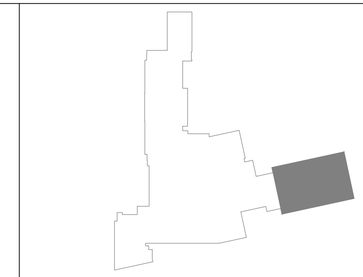
dr:	D.P.	
ck'd:	J.E.	03/08/2024
app'd:	J.K.	date

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

EF1.4

23086





1 EF1.5 KEY PLAN

BUILDING FIRE ALARM NOTES:

1. ACTUAL CONDUIT SIZE AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM NICET CERTIFIED DESIGNER.
2. THE ELECTRICAL CONTRACTOR SHALL HIRE A NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER TO DESIGN THE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.
3. THE DRAWINGS INDICATE ASSUMED LOCATIONS OF DEVICES AND SUGGESTED CONDUIT ROUTING DIAGRAMS ON THE PLANS. A FIRE ALARM NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER SHALL DETERMINE THE ACTUAL DEVICE TYPES AND THEIR LOCATIONS, OUTPUT AND THE ROUTING OF ALL RACEWAYS.
4. REFER TO SPECIFICATIONS SECTION 28 31 11 - DIGITAL ADDRESSABLE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM FOR ADDITIONAL REQUIREMENTS AND DESCRIPTION OF SYSTEM.
5. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE ALARM DEVICES.
6. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER ANSI 117.1 AND NFPA 72.
7. THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SHALL PROVIDE FULL INTELLIGIBILITY THROUGHOUT THE AREA.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
9. ALL FIRE ALARM WIRING SHALL COMPLY WITH NFPA 70., ARTICLE 760.
10. COORDINATE PLACEMENT OF CEILING SPEAKERS WITH LIGHTING FIXTURE AND MECHANICAL GRILLES.

STATE OF MICHIGAN
JORDAN KOENIG
ENGINEER
No. 6201059789
LICENSED PROFESSIONAL ENGINEER
03/08/24

NORTH

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

1 EF1.5 PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

SCALE: NONE

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

mechanical electrical engineering consultants pc
14466 Sheldon Rd. Ste. 260
Plymouth, MI 48170
P 734-464-6818
F 734-464-6819
MEEC JOB # 23-0133

		BIDS & PERMITS issued for
dr: D.P.		
ck'd: J.E.		03/08/2024 date
app'd: J.K.		

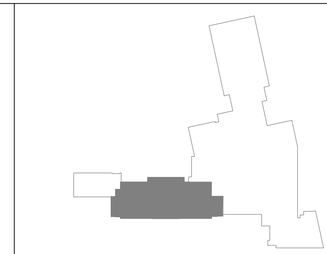
RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
PARTIAL FIRST FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

EF1.5

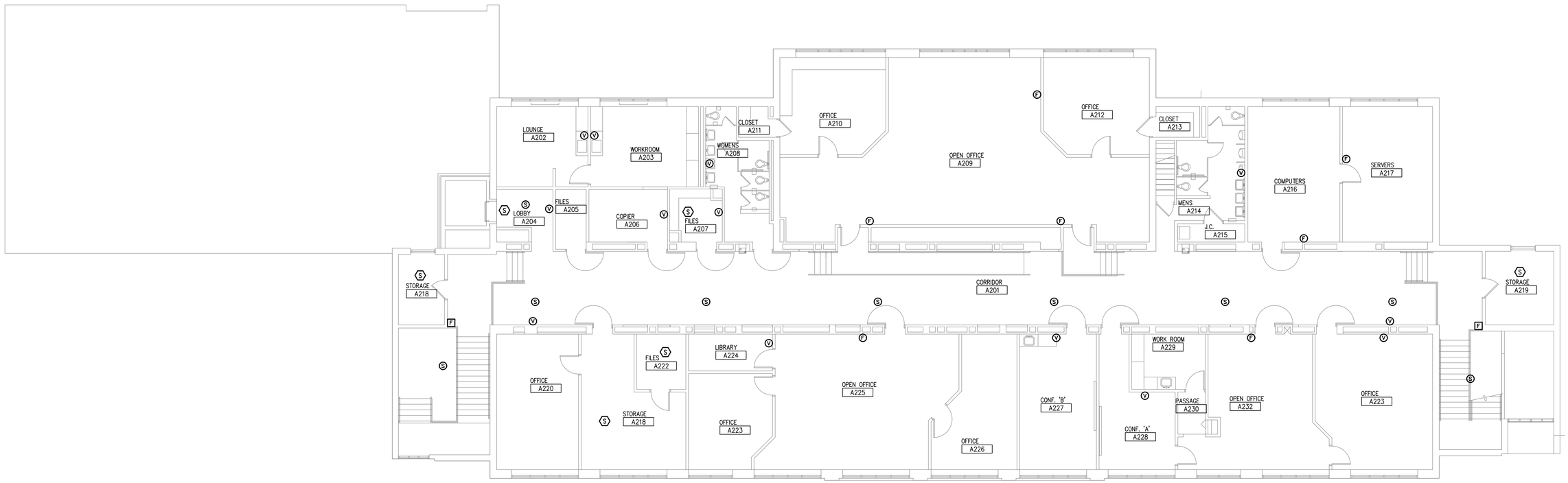
23086

BUILDING FIRE ALARM NOTES:

1. ACTUAL CONDUIT SIZE AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM NICET CERTIFIED DESIGNER.
2. THE ELECTRICAL CONTRACTOR SHALL HIRE A NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER TO DESIGN THE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.
3. THE DRAWINGS INDICATE ASSUMED LOCATIONS OF DEVICES AND SUGGESTED CONDUIT ROUTING DIAGRAMS ON THE PLANS. A FIRE ALARM NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER SHALL DETERMINE THE ACTUAL DEVICE TYPES AND THEIR LOCATIONS, OUTPUT AND THE ROUTING OF ALL RACEWAYS.
4. REFER TO SPECIFICATIONS SECTION 28 31 11 - DIGITAL ADDRESSABLE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM FOR ADDITIONAL REQUIREMENTS AND DESCRIPTION OF SYSTEM.
5. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE ALARM DEVICES.
6. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER ANSI 117.1 AND NFPA 72.
7. THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SHALL PROVIDE FULL INTELLIGIBILITY THROUGHOUT THE AREA.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
9. ALL FIRE ALARM WIRING SHALL COMPLY WITH NFPA 70, ARTICLE 760.
10. COORDINATE PLACEMENT OF CEILING SPEAKERS WITH LIGHTING FIXTURE AND MECHANICAL GRILLES.



1 EF2.1 KEY PLAN



1 EF2.1 PARTIAL SECOND FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

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

STATE OF MICHIGAN
JORDAN KOENIG
ENGINEER
No. 6201059789
REGISTERED PROFESSIONAL ENGINEER
03/08/24

NORTH

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

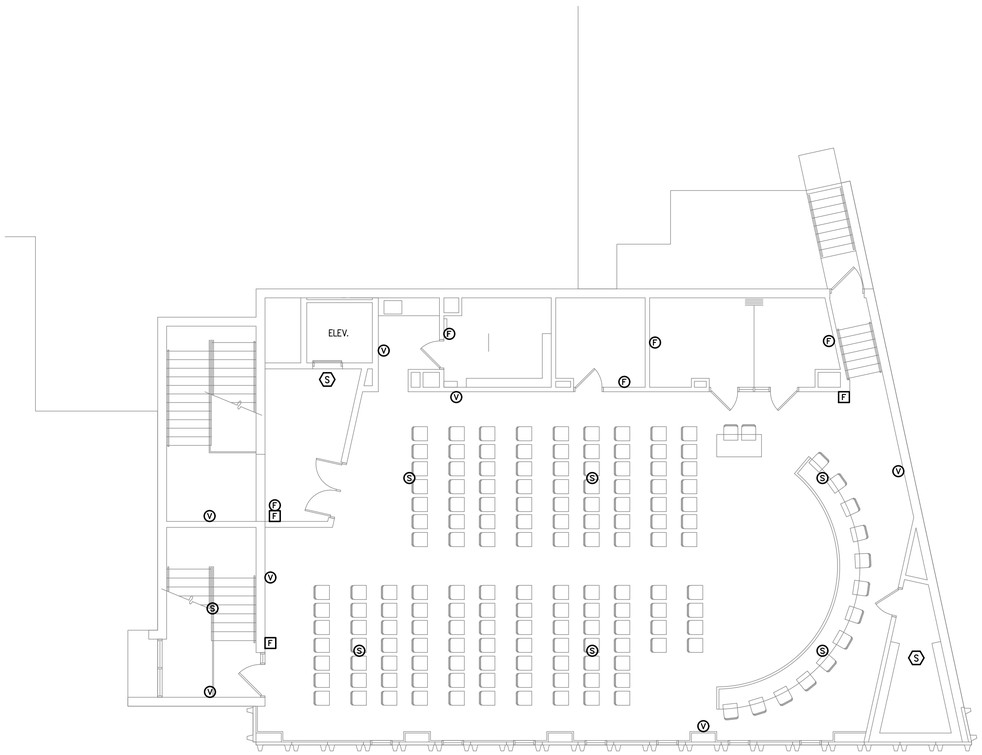
mechanical electrical engineering consultants pc
MEEC
14456 Sheldon Rd. Ste. 250
Plymouth, MI 48170
P 734-446-6616
F 734-446-6617
MEEC JOB # 22-013

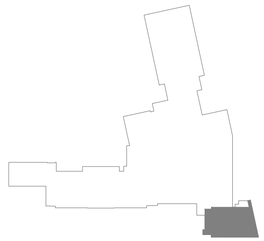
dr:	D.P.	
ck'd:	J.E.	03/08/2024 date
app'd:	J.K.	BIDS & PERMITS issued for

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
PARTIAL SECOND FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

EF2.1

23086





1 EF2.2 KEY PLAN

BUILDING FIRE ALARM NOTES:

1. ACTUAL CONDUIT SIZE AND ROUTING TO BE AS DIRECTED BY THE FIRE ALARM NICET CERTIFIED DESIGNER.
2. THE ELECTRICAL CONTRACTOR SHALL HIRE A NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER TO DESIGN THE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.
3. THE DRAWINGS INDICATE ASSUMED LOCATIONS OF DEVICES AND SUGGESTED CONDUIT ROUTING DIAGRAMS ON THE PLANS. A FIRE ALARM NICET LEVEL 3 CERTIFIED FIRE ALARM DESIGNER SHALL DETERMINE THE ACTUAL DEVICE TYPES AND THEIR LOCATIONS, OUTPUT AND THE ROUTING OF ALL RACEWAYS.
4. REFER TO SPECIFICATIONS SECTION 28 31 11 - DIGITAL ADDRESSABLE FIRE ALARM AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM FOR ADDITIONAL REQUIREMENTS AND DESCRIPTION OF SYSTEM.
5. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE ALARM DEVICES.
6. PROVIDE VISUAL NOTIFICATION DEVICES WITH CANDELA RATINGS SIZED PER ANSI 117.1 AND NFPA 72.
7. THE EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM SHALL PROVIDE FULL INTELLIGIBILITY THROUGHOUT THE AREA.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NAC PANELS, ACCESSORIES, CIRCUITS AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM.
9. ALL FIRE ALARM WIRING SHALL COMPLY WITH NFPA 70, ARTICLE 760.
10. COORDINATE PLACEMENT OF CEILING SPEAKERS WITH LIGHTING FIXTURE AND MECHANICAL GRILLES.

STATE OF MICHIGAN
JORDAN KOENIG
ENGINEER
No. 6201059789
LICENSED PROFESSIONAL ENGINEER
03/08/24

NORTH

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

1 EF2.2 PARTIAL SECOND FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

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

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

mechanical electrical engineering consultants pc
MEEC
14466 Sheldon Rd., Ste. 260
Plymouth, MI 48170
P 734-464-6616
F 734-464-6617
MEEC JOB # 23-013

dr: D.P.
ckd: J.E.
app'd: J.K.
03/08/2024 date
BIDS & PERMITS issued for

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
PARTIAL SECOND FLOOR - FIRE ALARM SYSTEMS NEW WORK PLAN

EF2.2

23086

DIGITAL, VOICE ALARM SIGNALING, ADDRESSABLE FIRE ALARM SYSTEM SPECIFICATION

1. General Conditions:

   A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to work of this section. The electrical contractor shall assume all obligations contained therein that affect his work. The electrical engineer shall be consulted in case of any disputes and his decision shall be final.

   B. The electrical contractor shall examine the architectural, plumbing and mechanical drawings and specifications and shall familiarize himself with all conditions of work affecting the contract. size and capacity of all equipment shall be as on plans or as indicated herein.

   C. Furnish labor and materials to provide a complete electrical system as required by the plans and specifications.

   D. Any item appearing on the drawings and not in the specification or vice versa, and any items appearing in neither but necessary to accomplish the intent of these specifications, shall be furnished by the electrical contractor.

   E. Where equipment specifications or descriptions include a specific manufacturer and catalog number, any substituted equipment or equipment proposed to be provided by an alternative manufacturer shall functionally meet, or exceed, the requirements of the specified equipment in all respects. Alternate manufacturers shall refer to product literature published by the manufacturer of the equipment specified to determine equivalency of their proposed alternate product.

2. Scope of Work: This specification contemplates the provision by the electrical contractor of all labor and materials required to install a complete system of electrical work as herein specified and as shown of the drawings. Without restricting the generality of the foregoing, the following shall be included:

   a. New Voice Alarm Signaling Fire Alarm System. complete.
   b. Grounding of complete per article 250 of the national electrical code and specifications.
   c. Demolition of existing fire alarm system as required.

3. Character of Equipment: All equipment shall be new and shall conform in all respects to the latest approved standards of the IEEE,,ANSI and the "UL" Label or Listing.

4. Codes and Ordinances: All electrical work shall comply with the 2023 edition of the National Electrical Code, Michigan Building Code, all ordinances and regulations, and the Occupational Safety and Health Act (OSHA).

5. Permits and Fees:

   a. The electrical contractor shall obtain all permits, pay all fees, including all costs accessed by the City of Brighton and arrange for all inspections for his work.
   b. Before submitting his bid, the electrical contractor shall determine from them all of their requirements and charges. All such requirements and charges shall be included in the base bid proposal.
   c. At the completion of electrical work, the electrical contractor shall furnish the owner with all certificates of final inspection and approvals.

6. Site Visit By Contractor:

   a. The contractor shall visit the site and verify the conditions under which his work must be conducted before submitting his proposal.
   b. The submitting of a proposal implies that the contractor has visited the site, is conversant with all site conditions, including existing services and equipment, obstructions and all conditions, which will be encountered in the removal and/or relocation of present materials and equipment, installation of new materials and cutting and patching, etc., for a complete fire alarm installation.
   c. If any interferences or violations appear and departure from the design intent of the bid documents is required, the contractor shall notify the architect prior to entering into contract with the owner. Failure to provide the architect with the aforementioned notification will result in the contractor being held responsible to complete all work to meet the design intent of the bid documents with no additional expenses ("extras") being incurred by the owner, architect, or engineer.

7. Cooperation With Other Contractors:

   a. Electrical contractor shall arrange all parts of his work in proper relation to the work of others and to the architectural finish. Where interferences occur, the electrical contractor shall, before installing the work involved, consult with the architect as to the exact location and level of his work. The architect's decision shall be final.
   b. The electrical contractor shall be responsible for the arrangement of his work and equipment and shall maintain proper headroom under his work. Should work installed by him require modification to avoid interference with other work, as determined by the architect, such changes shall be made without additional cost.

8. Summary:

   A. Section Includes:

      1. Fire-alarm control unit.
      2. Manual fire-alarm boxes.
      3. System smoke detectors.
      4. Notification appliances.
      5. Magnetic door holders.
      6. Remote annunciator.
      7. Addressable interface device.
      8. Digital alarm communicator transmitter.
      9. System printer.

   B. The drawings indicate locations of devices and suggested conduit routing diagrams on the plans

   C. The fire alarm sub-contractor shall hire a NICET Level 3 Certified fire alarm designer to design the fire alarm system.

9. Definitions:

   A. LED: Light-emitting diode.

   B. NICET: National Institute for Certification in Engineering Technologies

10. System Description:

   A. Non-coded, UL-certified, addressable system, with multiplexed signal transmission, dedicated to fire-alarm service only.

   B. Non-coded addressable system, with automatic sensitivity control of certain smoke detectors and multiplexed signal transmission, dedicated to fire-alarm service only.

11. Submittals:

   A. General Submittal Requirements:

      1. Submittals shall be approved by authorities having jurisdiction prior to submitting them to Architect

      2. Shop Drawings shall be prepared by persons with the following qualifications:

         a) Trained and certified by manufacturer in fire-alarm system design.
         b) NICET-certified fire-alarm technician Level 3 minimum.

   B. Product Data: For each type of product indicated.

      1. Shop Drawings: For fire-alarm system. Include plans, elevations, sections, details, and attachments to other work.

      2. Comply with recommendations in the "Documentation" Section of the "Fundamentals of Fire Alarm Systems" Chapter in NFPA 72.

      3. Include voltage drop calculations for notification appliance circuits.

      4. Include battery-size calculations.

      5. Include performance parameters and installation details for each detector, verifying that each detector is listed for complete range of air velocity, temperature, and humidity possible when air-handling system is operating.

      6. Include plans, sections, and elevations of heating, ventilating, and air-conditioning ducts, drawn to scale and coordinating installation of duct smoke detectors and access to them. Show critical dimensions that relate to placement and support of sampling tubes, detector housing, and remote status and alarm indicators. Locate detectors according to manufacturer's written recommendations.

      7. Include voice/alarm signaling-service equipment rack or console layout, grounding schematic, amplifier power calculation, and single-line connection diagram.

      8. Include floor plans to indicate final outlet locations showing address of each addressable device.

      9. Show size and route of cable and conduits.

   C. Delegated-Design Submittal: For smoke and heat detectors indicated to comply with Performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

      1. Drawings showing the location of each smoke and heat detector, ratings of each, and installation details as needed to comply with listing conditions of the detector.

      2. Design Calculations: Calculate requirements for selecting the spacing and sensitivity of detection, complying with NFPA 72.

12. Quality Assurance:

   A. Installer Qualifications: Installation shall be by personnel certified by NICET as fire-alarm Level 3 technician.

   B. Source Limitations for Fire-Alarm System and Components: Obtain fire-alarm system from single source from single manufacturer.

   C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

   D. NFPA Certification: Obtain certification according to NFPA 72.

13. Software Service Agreement:

   A. Comply with UL 864.

   B. Technical Support: Beginning with Substantial Completion, provide software support for two (2) years.

   C. Upgrade Service: Update software to latest version at Project completion. Install and program software upgrades that become available within two (2) years from date of Substantial Completion. Upgrading software shall include operating system. Upgrade shall include new or revised licenses for use of software.

   D. Provide thirty (30) days' notice to Owner to allow scheduling and access to system and to allow Owner to upgrade computer equipment if necessary.

14. Extra Materials:

   A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

   B. Lamps for Remote Indicating Lamp Units: Quantity equal to ten (10) percent of amount in stalled, but no fewer than 1 unit.

   C. Lamps for Strobe Units: Quantity equal to tem (10) percent of amount installed, but no fewer than 1 unit.

   D. Smoke Detectors, Fire Detectors: Quantity equal to ten (10) percent of amount of each type installed, but no fewer than 1 unit of each type.

   E. Detector Bases: Quantity equal to two (2) percent of amount of each type installed, but no fewer than 1 unit of each type.

   F. Keys and Tools: One extra set for access to locked and tamper-proofed components.

   G. Audible and Visual Notification Appliances: five (5) of each type installed.

   H. Fuses: two (2) of each type installed in the system.

15. Products:

   A. Manufacturers:

      1. Manufacturers: Available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
         a) National Time and Signal
         b) Siemens Building Technologies, Inc. ; Fire Safety Division
         c) Siemens Building Technologies, Inc.
         d) Federal Signal Corporation.
         e) Bosch

16. Systems of Operational Description:

   A. Fire-alarm signal initiation shall be by one or more of the following devices and systems:

      1. Manual stations.
      2. Heat detectors.
      3. Smoke detectors.
      4. Duct smoke detectors.
      5. Verified automatic alarm operation of smoke detectors.
      6. Automatic sprinkler system water flow.
      7. Fire-extinguishing system operation.
      9. Fire standpipe system.

   B. Fire-alarm signal shall initiate the following actions:

      1. Continuously operate alarm notification appliances.
      2. Identify alarm at fire-alarm control unit and remote annunciators.
      3. Transmit an alarm signal to the remote alarm receiving station.
      4. Unlock electric door locks in designated egress paths.
      5. Release fire and smoke doors held open by magnetic door holders.
      6. Activate voice/alarm communication system.
      7. Switch heating, ventilating, and air-conditioning equipment controls to fire-alarm mode.
      8. Recall elevators to primary or alternate recall floors.
      9. Record events in the system memory.
      10. Record events by the system printer.

   C. System trouble signal initiation shall be by one or more of the following devices and actions:

      1. Open circuits, shorts, and grounds in designated circuits.
      2. Opening, tampering with, or removing alarm-initiating and supervisory signal-initiating devices.
      3. Loss of primary power at fire-alarm control unit.
      4. Ground or a single break in fire-alarm control unit internal circuits.
      5. Abnormal ac voltage at fire-alarm control unit.
      6. Break in standby battery circuitry.
      7. Failure of battery charging.
      8. Abnormal position of any switch at fire-alarm control unit or annunciator.
      9. System Trouble and Supervisory Signal Actions: Initiate notification appliance and annunciate at fire-alarm control unit and remote annunciators. Record the event on system printer.

17. Fire-Alarm Control Unit:

   A. General Requirements for Fire-Alarm Control Unit:

      1. Field-programmable, microprocessor-based, modular, power-limited design with electronic modules, complying with UL 864 and listed and labeled by an NRTL.
      2. System software and programs shall be held in flash electrically erasable programmable read-only memory (EEPROM), retaining the information through failure of primary and secondary power supplies.
      3. Include a real-time clock for time annotation of events on the event recorder and printer.
      4. Addressable initiation devices that communicate device identity and status.
      5. Smoke sensors shall additionally communicate sensitivity setting and allow for adjustment of sensitivity at fire-alarm control unit.
      6. Temperature sensors shall additionally test for and communicate the sensitivity range of the device.
      7. Addressable control circuits for operation of mechanical equipment. Alphanumeric Display and System Controls:
         a) Arranged for interface between human operator at fire-alarm control unit and addressable system components including annunciation and supervision.
         b) Display alarm, supervisory, and component status messages and the programming and control menu.
         c) Annunciator and Display: Liquid-crystal type, 3 line(s) of 80 characters, minimum.
         d) Keypad: Arranged to permit entry and execution of programming, display, and control commands and to indicate control commands to be entered into the system for control of smoke-detector sensitivity and other parameters.

   B. Circuits:

      1. Initiating Device, Notification Appliance, and Signaling Line Circuits: NFPA 72, Class A.
      2. Initiating Device Circuits: Style 4.
      3. Notification Appliance Circuits: Style Y.
      4. Signaling Line Circuits: Style 4.
      5. Install no more than 50 addressable devices on each signaling line circuit.

   C. Serial Interfaces: Two RS-232 ports for printers.

   D. Smoke-Alarm Verification:

      1. Initiate audible and visible indication of an "alarm-verification" signal at fire-alarm control unit.
      2. Activate an NRTL-listed and -approved "alarm-verification" sequence at fire-alarm control unit and detector.
      3. Record events by the system printer.
      4. Sound general alarm if the alarm is verified.
      5. Cancel fire-alarm control unit indication and system reset if the alarm is not verified.

   E. Door Controls:

      1. Door hold-open devices that are controlled by smoke detectors at doors in smoke barrier walls shall be connected to fire-alarm system.
      2. For alarm verification, confirm that specified detector type is available with alarm verification.

   F. Remote Smoke-Detector Sensitivity Adjustment:

      1. Controls shall select specific addressable smoke detectors for adjustment, display their current status and sensitivity settings, and change those settings. Allow controls to be used to program repetitive, time-scheduled, and automated changes in sensitivity of specific detector groups. Record sensitivity adjustments and sensitivity-adjustment schedule changes in system memory, and print out the final adjusted values on system printer.

   G. Transmission to Remote Alarm Receiving Station: Automatically transmit alarm, supervisory, and trouble signals to a remote alarm station.

   H. Voice/Alarm Signaling Service:

      1. Central emergency communication system with redundant microphones, preamplifiers, amplifiers, and tone generators provided as a special module that is part of fire-alarm control unit.
      2. Indicated number of alarm channels for automatic, simultaneous transmission of different announcements to different zones or for manual transmission of announcements by use of the central-control microphone.
      3. Amplifiers shall comply with UL 1711 and be listed by an NRTL.
      4. Allow the application of an evacuation signal to indicated number of zones and, at same time, allow voice paging to the other zones selectively or in any combination.
      5. Programmable tone and message sequence selection.
      6. Standard digitally recorded messages for "Evacuation" and "All Clear."
      7. Generate tones to be sequenced with audio messages of type recommended by NFPA 72 and that are compatible with tone patterns of notification appliance circuits of fire-alarm control unit.

   I. Status Annunciator:

      1. Indicate the status of various voice/alarm speaker zones and the status of firefighters' two-way telephone communication zones.

   J. Preamplifiers, amplifiers, and tone generators shall automatically transfer to backup units, on primary equipment failure.

   K. Printout of Events:

      1. On receipt of signal, print alarm, supervisory, and trouble events.
      2. Identify zone, device, and function. Include type of signal (alarm, supervisory, or trouble) and date and time of occurrence. Differentiate alarm signals from all other printed indications.
      3. Print system reset event, including same information for device, location, date, and time.
      4. Commands initiate the printing of a list of existing alarm, supervisory, and trouble conditions in the system and a historical log of events.

   L. Primary Power:

      1. 24-V dc obtained from 120-V ac service and a power-supply module.
      2. Initiating devices, notification appliances, signaling lines, trouble signals, supervisory signals, supervisory and digital alarm communicator transmitters and, digital alarm radio transmitters shall be powered by 24-V dc source.
      3. Alarm current draw of entire fire-alarm system shall not exceed 80 percent of the power-supply module rating.

   M. Secondary Power:

      1. 24-V dc supply system with batteries, automatic battery charger, and automatic transfer switch.
      2. Batteries: Gel-cell type.

   N. Instructions:

      1. Computer printout or typewritten instruction card mounted behind a plastic or glass cover in a stainless-steel or aluminum frame.
      2. Include interpretation and describe appropriate response for displays and signals.
      3. Briefly describe the functional operation of the system under normal, alarm, and trouble conditions.

18. Manual Fire-Alarm Boxes:

   A. General Requirements for Manual Fire-Alarm Boxes

      1. Comply with UL 38. Boxes shall be finished in red with molded, raised-letter operating instructions in contrasting color; shall show visible indication of operation; and shall be mounted on recessed outlet box. If indicated as surface mounted, provide manufacturer's surface back box.
      2. Single-action mechanism, pull-lever type; with integral addressable module arranged to communicate manual-station status (normal, alarm, or trouble) to fire-alarm control unit.
      3. Station Reset: Key- or wrench-operated switch.
      4. Indoor Protective Shield: Factory-fabricated clear plastic enclosure hinged at the top to permit lifting for access to initiate an alarm. Lifting the cover actuates an integral battery-powered audible horn intended to discourage false-alarm operation.

19. System Smoke Detectors:

   A. General Requirements for System Smoke Detectors:

      1. UL 268 covers detectors that are part of a fire-alarm system and detectors intended solely for control of releasing devices such as door holders and dampers.
      2. Comply with UL 268; operating at 24-V dc, nominal.
      3. Integral Addressable Module: Arranged to communicate detector status (normal, alarm, or trouble) to fire-alarm control unit.
      4. Base Mounting: Detector and associated electronic components shall be mounted in a twist-lock module that connects to a fixed base. Provide terminals in the fixed base for connection to building wiring.
      5. Self-Restoring: Detectors do not require resetting or readjustment after actuation to Restore them to normal operation.
      6. Integral Visual-Indicating Light: LED type indicating detector has operated and power-on Status.
      7. Photoelectric Smoke Detectors:
         a) Detector address shall be accessible from fire-alarm control unit and shall be able to identify the detector's location within the system and its sensitivity setting.
         b) An operator at fire-alarm control unit, having the designated access level, shall be able to manually access the following for each detector:
            1. Primary status.
            2. Device type.
            3. Present average value.
            4. Present sensitivity selected.
            5. Sensor range (normal, dirty, etc.).
      8. Ionization Smoke Detector:
         a) Detector address shall be accessible from fire-alarm control unit and shall be able to identify the detector's location within the system and its sensitivity setting.
         b) An operator at fire-alarm control unit, having the designated access level, shall be able to manually access the following for each detector:
            1. Primary status.
            2. Device type.
            3. Present average value.
            4. Present sensitivity selected.
            5. Sensor range (normal, dirty, etc.).

20. Notification Appliances:

   A. General Requirements for Notification Appliances: Individually addressed, connected to a signaling line circuit, equipped for mounting as indicated and with screw terminals for system connections.

   B. Combination Devices: Factory-integrated audible and visible devices in a single-mounting assembly, equipped for mounting as indicated and with screw terminals for system connections.

   C. Visible Notification Appliances: Xenon strobe lights comply with UL 1971, with clear or nominal white polycarbonate lens mounted on an aluminum faceplate. The word "FIRE" is engraved in minimum 1-inch- (25-mm-) high letters on the lens.
      1. Rated Light Output: 15/30/75/110 cd, selectable in the field.
      2. Mounting: Wall mounted unless otherwise indicated.
      3. Flashing shall be in a temporal pattern, synchronized with other units.
      4. Strobe Leads: Factory connected to screw terminals.
      5. Mounting Faceplate: Factory finished white.

   D. Voice/Tone Notification Appliances:

      1. Appliances shall comply with UL 1480 and shall be listed and labeled by an NRTL
      2. Use high-range speakers in noisy environments and low-range speakers in quiet environments.
      3. Select speakers for each location that comply with NFPA 72 requirements and ADA-ABA Accessibility Guidelines.
      4. Matching Transformers: Tap range matched to acoustical environment of speaker location.

21. Remote Annunciator:
   A. Description:

      1. Annunciator functions shall match those of fire-alarm control unit for alarm, supervisory, and trouble indications.
      2. Manual switching functions shall match those of fire-alarm control unit, including acknowledging, silencing, resetting, and testing.
      3. Remote Annunciator shall be installed at front lobby at location as directed by architect and with approval by local fire marshal.
      4. Display Type and Functional Performance:
         a) Alphanumeric display and LED indicating lights shall match those of fire-alarm control unit.
         b) Provide controls to acknowledge, silence, reset, and test functions for alarm, supervisory, and trouble signals.

22. Addressable Interface Device:
   A. Description: Microelectronic monitor module, NRTL listed for use in providing a system address for alarm-initiating devices for wired applications with normally open contacts.
      1. Integral Relay: Capable of providing a direct signal to elevator controller to initiate Elevator recall.

23. Digital Alarm Communicator Transmitter:
   A. Digital alarm communicator transmitter shall be acceptable to the remote central station and shall comply with UL 632 and be listed and labeled by an NRTL.
   B. Functional Performance:
      1. Unit shall receive an alarm, supervisory, or trouble signal from fire-alarm control unit and automatically capture two telephone line(s) and dial a preset number for a remote central station.
      2. When contact is made with central station(s), signals shall be transmitted. If service on either line is interrupted for longer than 45 seconds, transmitter shall initiate a local trouble signal and transmit the signal indicating loss of telephone line to the remote alarm receiving station over the remaining line.
      3. Transmitter shall automatically report telephone service restoration to the central station. If service is lost on both telephone lines, transmitter shall initiate the local trouble signal.
      4. Local functions and display at the digital alarm communicator transmitter shall include the following:
         a) Verification that both telephone lines are available.
         b) Programming device.
         c) LED display.
         d) Manual test report function and manual transmission clear indication.
         e) Communications failure with the central station or fire-alarm control unit.
         f) Digital data transmission shall include the following:
            1) Address of the supervisory signal.
            2) Address of the trouble-initiating device.
            3) Loss of ac supply or loss of power.
            4) Low battery.
            5) Abnormal test signal.
            6) Communication bus failure.
         g) Secondary Power: Integral rechargeable battery and automatic charger.
         h) Self-Test: Conducted automatically every 24 hours with report transmitted to central station.

24. Execution:

   A. Equipment Installation:

      1. Comply with NFPA 72 for installation of fire-alarm equipment.
      2. Smoke- or Heat-Detector Spacing:
         a. Comply with NFPA 72, "Smoke-Sensing Fire Detectors" Section in the "Initiating Devices" Chapter, for smoke-detector spacing.
         b. Smooth ceiling spacing shall not exceed 30 feet (9 m).
         c. Spacing of detectors for irregular areas, for irregular ceiling construction, ar for
         d. Lighting Fixtures: Locate detectors not closer than 12 inches (300 mm) fro part of a lighting fixture.
      3. Remote Status and Alarm Indicators: Install near each smoke detector and eac sprinkler water-flow switch and valve-tamper switch that is not readily visible fro normal viewing position.
      4. Audible Alarm-Indicating Devices: Install not less than 6 inches (150 mm) belov the ceiling. Install bells and horns on flush-mounted back boxes with the device-operating mechanism concealed behind a grille.
      5. Visible Alarm-Indicating Devices: Install adjacent to each alarm bell or alarm ho and at least 6 inches (150 mm) below the ceiling.
      6. Device Location-Indicating Lights: Locate in public space near the device they monitor.
      7. Fire-Alarm Control Unit: Surface mounted, with tops of cabinets not more than 7 inches (1830 mm) above the finished floor.
      8. Annunciator: Install with top of panel not more than 72 inches (1830 mm) above the finished floor.

25. Identification:

   A. Identify system components, wiring, cabling, and terminals.

26. Grounding:

   A. Ground fire-alarm control unit and associated circuits; comply with IEEE 1100. Install a ground wire from main service ground to fire-alarm control unit.

27. Field Quality Control:

   A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect, test, and adjust components, assemblies, and equipment installations, including connections.
   B. Perform tests and inspections.
   C. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
   D. Tests and Inspections:
      1. Visual Inspection: Conduct visual inspection prior to testing.
      2. Inspection shall be based on completed Record Drawings and system documentation that is required by NFPA 72 in its "Completion Documents, Preparation" Table in the "Documentation" Section of the "Fundamentals of Fire Alarm Systems" Chapter.
      3. Comply with "Visual Inspection Frequencies" Table in the "Inspection" Section o the "Inspection, Testing and Maintenance" Chapter in NFPA 72; retain the "Initia Reacceptance" column and list only the installed components.
      4. System Testing: Comply with "Test Methods" Table in the "Testing" Section of t "Inspection, Testing and Maintenance" Chapter in NFPA 72.

28. Demonstration:

   A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain fire-alarm system.

29. Standards of Material and Workmanship
   A. All work shall be done at such times and in such a manner as will least interfere with the maintenance and operation of all related or affected systems.
   B. All materials and equipment shall bear the label of approval of the National Board of Fire Underwriter's Laboratories.
   C. The electrical contractor shall effectively protect, at his own expense, such of his work, materials or equipment as is liable to injury during the construction period.
   D. It is not intended that the drawings or this specification indicate or specify each device, piece of conduit, fittings, etc., required for the installation. Where items are required for the satisfactory operation of the installation and are not indicated on the drawings, they shall be considered to be both specified and indicated.
   E. General requirements and details of equipment are shown. Dimensions or scales shown are approximate and must be checked at job prior to installation of equipment or any order given for fabrication.
   F. Electrical contractors shall have competent foreman on the premises at all times to superintend and check and lay out all work, give information to general contractor regarding chases and openings, and be responsible for such locations. This contractor shall cooperate with other contractors where chases, openings, pipes, foundations, etc., are in proximity to the work of other trades and arrange the work to fit. This contractor shall study where other trades leave connections and outlets to be connected, so that all work and appliances shall be properly arranged for and connected ready for use

30. Substitutions:

   A. Alternate manufacturer's electrical equipment shall be similar in performance, physical appearance and construction to be considered as equal to equipment specified.
   B. Alternate manufacturer's electrical equipment proposed to be substituted by bidding contractor must be pre-approved during bidding. Contractor, or equipment representative shall email all such requests with equipment cuts to engineer at least one week prior to submitting bids. Engineer will review the proposed alternate equipment and issue a written acceptance or denial by return email. Verbal approval will not be acceptable.
   C. All equipment shop drawings, fixture cuts, etc., submitted after award of contract for electrical equipment which was not pre-approved will be rejected.
   D. In the event substitutions are proposed to the engineer after the contract has been awarded, the engineer will record all time used by him in evaluation of each proposed substitution.
   E. Whether or not the engineer approves the proposed substitution, the contractor agrees to promptly upon receipt of the engineer reimburse the engineer at the rate of two and three-quarter times the direct cost to the engineer for all time spent by him in the evaluation of the proposed substitution.

STATE OF MICHIGAN
JORDAN KOENIG ENGINEER
No. 6201059789
LICENSED PROFESSIONAL ENGINEER
03/08/24

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

mechanical electrical engineering consultants pc
MEEC
1466 Sheldon Rd. Ste. 250
Plymouth, MI 48170
P 734-455-5515
F 734-455-5516
MEEC JOB # 23-2133

dr: D.P.
ckd: J.E.
app'd: J.K. 03/08/2024 date

BIDS & PERMITS issued for

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
ELECTRICAL SPECIFICATIONS

EF3.1

23086

I EF3.1 ELECTRICAL SPECIFICATIONS

SCALE: NONE

31. Cutting and Patching: Cutting and patching of walls, floors, ceilings, roof, etc. shall be done by architectural trades contractor but paid for by the electrical contractor. Structural members shall not be cut without obtaining written permission from the architect. Conduits passing through roofs or outside walls exposed to weather shall be carefully flashed. Fire-proofing of holes shall be provided and shall be of a UL listed material and approved by authority having jurisdiction (AHJ).

32. Inspection, Testing and Start-up:

A. The intent of the inspection, testing, and check-out work specified herein, or required, is to ensure that all electrical workmanship and equipment, whether owner furnished, or contractor furnished, is installed and performs in accordance with the design specifications, drawings, manufacturer's instructions and all applicable codes and requirements. Also, it is intended to provide, insure, or to determine the following:

1) If the equipment or installation has been subjected to damage during shipment or installation.
2) If the equipment is in accordance with the purchase orders and specifications.
3) Provide initial acceptance tests and recorded data that can be used as a bench mark for future routine maintenance and trouble shooting by owner's maintenance forces.
4) Insure a successful start-up with a minimum of last-minute interruptions and problems.
5) Determine the suitability of the equipment and systems for energization and placing into operating service.
6) Provide assurance that each system component is not only installed satisfactorily but performs, and will continue to perform, its function in the system with reasonable reliability throughout the life of the project.

B. Contractor Responsibility: The contractor shall provide all necessary labor, materials, tools, test instruments or other equipment or service and expenses required to inspect, test, adjust, set, calibrate, functionally and operationally check all work and components of the various electrical systems and circuitry.

33. Codes, Permits and Fees:

A. Obtain and pay for all permits, licenses, inspections, approvals and fees required and ensure that the entire electrical installation conforms to codes and regulations required by authority or agency having jurisdiction over the entire installation or construction of work included. All fees shall be included in the base proposal.

B. The electrical contractor shall, at his expense, have an inspection made by the local electrical inspection department of the complete electrical installation and shall deliver certificate of approval of the complete work to the owner before receiving his final payment.

C. Whenever the requirements of these specifications and drawings exceed the requirements of governing codes, laws, regulations and ordinances, these specifications and drawings shall govern.

D. Should any change in the drawings and specifications be required to conform to these codes, ordinances, laws orf regulations, notify the architect-engineer at time of submitting proposal. After entering into a contract, contractor shall complete all work necessary to meet code, laws, regulations and ordinance requirements without extra expense to the owner.

34. Flashing: Where the work included requires conduit to pass through the roof or any other building element requiring waterproofing, the conduit shall be flashed under the specification section concerned, and the joint made waterproof in full conformance with waterproofing warranty requirements.

35. Supporting Devices

A. Codes and Standards

1) Methods of installation shall comply with the provisions of applicable sections of the latest editions of the National Electrical Code, the State of Michigan Building Code, the State of Michigan Electrical Code, the International Building Code, and the ICC Electrical Code, as applicable to construction and installation of electrical supporting devices.
2) Compliance: Comply with applicable MSS Standard Requirements, National Electrical Contractors Association's "Standard of installation", UL, and Federal Specification FF-S-760.

B. Provide supporting devices which comply with manufacturer's standard materials, design and construction in accordance with published product information, and as required for complete

36. Obstructions: Should any structural difficulties prevent setting of cabinets, running conductors, etc., at points shown on plans, the necessary minor deviations therefrom, as determined by the architect, may be permitted and must be made without additional cost.

37. Any item appearing on the drawings and not in the specification or vice versa, and any items appearing in neither but necessary to accomplish the intent of these specifications, shall be furnished by the electrical contractor.

38. Conductors:

A. All conductors shall be copper and shall be installed in conduit unless otherwise noted.
B. All feeders and branch circuit conductors shall be minimum size #12 a.w.g., 75 deg. C. insulated, type "XHHW", "THW" or "THWN" insulated.
C. No wiring smaller than no. 12 a.w.g. shall be used unless otherwise noted, and all wire no. 10 a.w.g. and larger shall be stranded, unless otherwise specified.
D. Conductors shall be color coded per the National Electrical Code.

39. Conduits:

A. All conduits shall be run concealed in finished areas unless otherwise noted. Exposing of any conduit in un-finished areas shall be only done with the written approval of the architect.
B. All conduit shall be ½" minimum size unless otherwise noted.
C. All conduits installed at exterior locations below grade shall be schedule 40 pvc.
D. A grounding conductor sized per article 250 of the N.E.C. shall be included with all circuit conductors.

40 Fuses: Fuses 0 to 600 ampere shall be current limiting dual-element type.

41. Outlet Boxes:

A. Outlets boxes shall be zinc-coated and shall be of the size and type to accommodate:

1) Structural conditions
2) Size and number of conductors and conduit entering.
3) Devices or fixtures for which required.
4) Outlet boxes shall be firmly anchored in place and shall be provided with approved fixture supports.
5) Outlet boxes for switches, convenience outlets, etc., shall be set flush with finished walls.
6) Outlet boxes shall be not less than 1-1/2 inches deep unless shallower boxes are required by structural conditions. Ceiling and bracket boxes shall be not less than 4 inch octagonal except that smaller boxes may be used where required by the particular fixture installed. Flush or recessed fixtures shall be provided with separate junction boxes when required by the fixture terminal requirements. Switch and receptacle boxes shall be approximately 4 inches.

42. Grounding

A. Furnish and install a complete grounding system in accordance with the National Electrical Code and local codes and ordinances.
B. Grounding path from circuits, equipment, and conductor enclosures shall be permanent and continuous; and shall have a resistance to ground of less than 5 ohm.
C. All cabinets, conduit systems, transformers, etc., shall be thoroughly grounded in accordance with the N.E.C. sections 250.24; 250.50; 250.52; and tables 250.66 and 250.122.
D. An insulated copper equipment grounding conductor sized in accordance with N.E.C. 250.122 shall be installed with all branch-circuit conductors.
E. Ground fire-alarm control unit and associated circuits; comply with IEEE 1100. Install a ground wire from main service ground to fire-alarm control unit.

43. Fire and Smoke Barriers:

A. All conduit penetrations in fire-rated walls and floors and designated smoke barriers shall be sealed with an approved fire barrier material.
B. System shall pass fire test exposure per ASTM E-814 (UL 1479) and will provide a 3-hour fire rating.
C. Barrier shall consist of a 1/4 inch thick composite sheet. Bonded on one side shall be a layer of 28 gauge galvanized steel. The other side shall be reinforced with steel wire mesh and covered with aluminum foil. Sandwiched between shall be an organic/ inorganic, fire resistive elastomeric sheet which when exposed to temperatures in excess of 250^{o}f. (121^{o}c), the sheet shall expand 8-10 times its original size forming a hard characteristic tightly sealing against spread of flame, gases and smoke.

D. Product:

1) 3M fire barrier composite sheet CS-195.
2) All seams and edges shall be sealed with 3M CP-25 fire barrier caulk or 303 putty.

E. Alternate Manufacturers:

1) Subject to compliance with requirements, alternate manufacturers offering similar products may be incorporated in the work.

44. Electrical Identification:

A. Materials and methods of installation shall comply with the provisions of applicable sections of latest editions of the National Electrical Code, the State of Michigan Building Code, the National Electrical Code and the ICC Electrical Code as applicable to installation of identifying labels and markers for wiring and equipment.

B. Comply with applicable requirements of UL Std 969, "Marking and Labeling Systems", pertaining to electrical identification systems.

C. Comply with applicable requirements of NEMA Std no's WC-1 and WC-2 pertaining to electrical identification systems.

D. Lettering and Graphics:

1) Coordinate names, abbreviations and other designations used in electrical identification work, with corresponding designations shown, specified or scheduled. Provide numbers, lettering and wording as indicated or, if not otherwise indicated, as recommended by manufacturer or as required for proper identification and operation/ maintenance of electrical systems and equipment. Comply with ANSI A13.1 pertaining to minimum sizes for letters and numbers.

E. Conduit Identification:

1) Where electrical conduit is exposed in spaces with exposed mechanical piping which is identified by a color-coded method, apply color-coded identification on electrical conduit in a manner similar to piping identification. Except as otherwise indicated, use white as coded color for conduit.

45. Shop Drawings and Submittals:

Electrical contractor shall submit equipment shop drawings to the architect for review prior to installation of lighting fixtures, lighting control devices and wiring devices,

46. Guarantee:

Electrical contractor shall guarantee all work installed by his workmen under this contract to be free from all defective workmanship and materials for a period of one year after the acceptance of the building by the owner, and should defects occur within this period, repair and/or replace defective items, at no expense to the owner.

47. Cleaning:

Upon completion of the project, all enclosures shall be left free of refuse and the exterior free of dirt and paint splatters.

48. Demolition work:

A. The existing building is being modified to suite the new requirements. during the new work, Maintain circuits supplying existing equipment and apartments during the new work. All such work shall be as scheduled by the general contractor to ensure proper coordination of trades while construction is being done.

B. It shall be the responsibility of the contractor to visit the project site to correctly ascertain the scope of services and to include all pertinent costs in his bid. No extras will be allowed.

C. All electrical work interfering with and requiring modification for the new requirements shall be relocated as directed by building management personnel and reinstalled and rewired as necessary to the satisfaction of the building management.

D. Abandoned and inactive conduits, wire, devices, equipment, etc., shall be removed in their entirety. In addition to these items, this contractor shall remove all items as indicated on the plans, or as required to clean up the entire area of unused, abandoned, or inactive materials. Conduit and wiring feeding devices and equipment to be removed shall also be removed up to the next active pullbox, junction box, or panelboard.

E. All equipment and wiring not in renovation areas but affected by work in renovation areas shall be reconnected as required for a complete working system.

F. Hangers, messenger cable, brackets, etc, supporting items to be removed shall also be unfastened and removed. Open holes in ducts, boxes, panelboards, and knockouts shall be closed with suitable snap plugs or filler plates.

G. The contractor shall remove and deliver to a place designated by the owner all existing electrical equipment no longer intended for use. This equipment remains the property of the owner.

H. Any equipment, devices, materials, etc., the owner elects not to retain shall be legally disposed of by the contractor off the owner's premises.

I. At completion of all electrical work, update circuit directories in panels affected by new work with new type written circuit descriptions. Circuit directories shall be mounted on inside of front panel cover in a clear plastic enclosure.

STATE OF MICHIGAN
JORDAN
KOENIG
ENGINEER
No
6201059789
REGISTERED PROFESSIONAL ENGINEER
03/08/24

THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTICE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.

1 EF3.2 ELECTRICAL SPECIFICATIONS

SCALE: NONE

Lindhout Associates architects aia pc
10465 citation drive, brighton, michigan 48116-9510
www.lindhout.com(810)227-5668 fax:(810)227-5855

mechanical electrical engineering consultants pc
MEEC
14466 Sheldon Rd. Ste. 250
Plymouth, MI 48170
P 734-464-6616
F 734-464-6617
MEEC JOB # 23-013

		BIDS & PERMITS issued for
		03/08/2024 date
dr: D.P.	ck'd: J.E.	app'd: J.K.

RENOVATIONS for:
BRIGHTON AREA SCHOOLS
(B.E.C.C. BLDG.) BRIGHTON, MICHIGAN
ELECTRICAL SPECIFICATIONS

EF3.2

23086