ELECTRICAL LEGEND

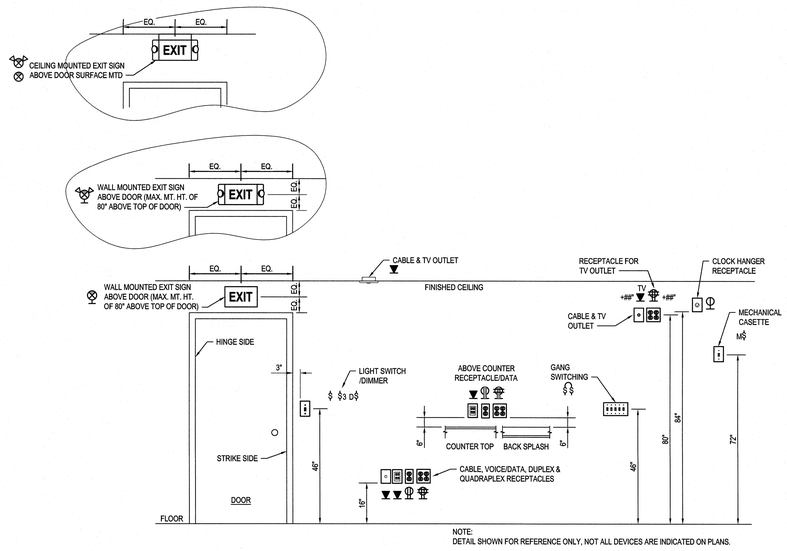
SYMBOL	DESCRIPTION
	2x4 LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	2x2 LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	4FT OR 8FT LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	2FT LIGHT FIXTURE, SURFACE WALL MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	SURFACE LIGHT FIXTURE LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	WALL MOUNTED LIGHT FIXTURE LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	RECESSED LIGHT FIXTURE LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	SUSPENDED HIGH-BAY LED LIGHT FIXTURE LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	STAGE TRACK WITH LIGHT, LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	EXIT SIGN, SINGLE FACE, CEILING, ARROW INDICATES DIRECTION. LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	EXIT SIGN, DOUBLE FACE, CEILING MOUNTED, ARROW INDICATES DIRECTION. LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	EXIT SIGN W/EMERGENCY LIGHTING UNIT, CEILING MOUNTED (SEE FIXTURE SCHEDULE)
	EXIT SIGN W/EMERGENCY LIGHTING UNIT, WALL/END MOUNTED, ARROW INDICATES DIRECTION. INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
	EMERGENCY LIGHTING UNIT, 2-HEAD WITH BATTERY BACK-UP, WALL MOUNTED, "NOT SWITCHED" INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)
$	SWITCH, SINGLE POLE, 120/277VAC, 20A, MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED (SEE ELECTRICAL MOUNTING HEIGHT DETAIL). LOWER CASE LETTER INDICATES FIXTURE SWITCHING (WHEN INDICATED)
$3	3-WAY SWITCH, SINGLE POLE 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED
$4	4-WAY SWITCH 120/277 VAC, 20A, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED
OS	CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, 360° COVERAGE 2 = SECOND CONTACT TO BE PROVIDED FOR CONNECTION TO BUILDING MANAGEMENT
D$	WALL MOUNTED 0 TO 10V DIMMER SWITCH SINGLE BUTTON ON/OFF CONTROL, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
O$	WALL MOUNTED OCCUPANCY SENSOR, SINGLE BUTTON ON/OFF CONTROL, 180° COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
O$2	WALL MOUNTED OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL, 180° COVERAGE, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
O$D	WALL MOUNTED OCCUPANCY SENSOR W/ 0 TO 10V DIMMER SWITCH SINGLE BUTTON ON/OFF CONTROL, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
O$F	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL, 180° COVERAGE, ADDITIONAL POWER SUPPLY FOR FAN OPERATION, MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED.
208/120V 480/277V	PANELBOARD, SURFACE OR RECESSED MOUNTED AS SHOWN. SIZE, RATINGS, AND MOUNTING AS INDICATED ON PANEL SCHEDULE. CONTRACTOR IS RESPONSIBLE FOR REQUIRED CLEARANCE IN FRONT OF ELECTRICAL PANEL. SEE NEC TABLE 110.26 WORKING SPACES FOR ADDITIONAL CLEARANCE CONDITIONS.
	TRANSFORMER, SIZE AS INDICATED ON DRAWING
	RECESSED SINGLE/DOUBLE GANG BOX WITH BLANK COVER PLATE, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED

SYMBOL	DESCRIPTION
	RECESSED DEDICATED/PICTURE/CLOCK SINGLE OUTLET, 120VAC, 20A, MOUNTED AS INDICATED ON DRAWING.
WP	RECEPTACLE, DUPLEX, 120VAC, 20A, MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL) WP - LISTED WEATHER-RESISTANT TYPE DEVICE WITH WEATHERPROOF IN USE EXTRA DUTY COVER GFI - GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, MOUNTED 24" AFF LOCATE GFI TEST SWITCH IN A READILY ACCESSIBLE LOCATION
TR	RECEPTACLE, DUPLEX, TAMPER-PROOF, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH. +##" - INDICATES MOUNTING HEIGHT OF DEVICE IN INCHES AFF (IF GIVEN) (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
TR	RECEPTACLE, QUADPLEX, TAMPER-PROOF, 120VAC, 20A MOUNTED 16"AFF UNLESS OTHERWISE NOTED (SEE ELECTRICAL MOUNTING HEIGHT DETAIL) WP - LISTED WEATHER-RESISTANT TYPE DEVICE WITH WEATHERPROOF IN USE EXTRA DUTY COVER GFI - GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, MOUNTED 24" AFF LOCATE GFI TEST SWITCH IN A READILY ACCESSIBLE LOCATION TR - TAMPER RESISTANT
	RECEPTACLE, QUADPLEX, TAMPER-PROOF, 120VAC, 20A, MOUNTED 6" ABOVE COUNTER TOP OR BACK SPLASH. +##" - INDICATES MOUNTING HEIGHT OF DEVICE IN INCHES AFF (IF GIVEN) (SEE ELECTRICAL MOUNTING HEIGHT DETAIL)
	RECEPTACLE, 208VAC, 2 POLE, 3 WIRE, WALL MOUNTED, SIZE AS INDICATED ON DRAWING
	RECEPTACLE, 480VAC, 2 POLE, 3 WIRE, WALL MOUNTED, SIZE AS INDICATED ON DRAWING
30A/3R, W/ 30AF	DISCONNECT SWITCH, FUSED, HEAVY **(GENERAL)** DUTY, SIZE AS INDICATED ON DRAWINGS (SIZE AS INDICATED IN THE EQUIPMENT CONNECTION SCHEDULE) ##A = DISCONNECT SIZE / # = NUMBER OF POLES / ## = NEMA RATING, /##AF = FUSE SIZE
MS##	MANUAL MOTOR STARTER, ELECTRICAL CONTRACTOR SHALL COORDINATE POLES AND SIZE WITH EQUIPMENT ## = AMPERAGE RATING WHEN INDICATED ON DRAWING
	EXISTING CONDUIT WITH DUPLEX RECEPTACLE
	EXISTING POWER POLE
	POWER POLE, HUBBEL CAT.# HPS10A OR EQUAL, 10'-2" EXTRUDED ALUMINUM SERVICE POLE, 2-CHANNELS WITH CEILING TRIM, ANODIZED ALUMINUM, MULTI-SERVICE, TWO-CHANNEL POLE WITH (2) STYLELINE KNOCKOUTS, (2) 20AMP RECEPTACLES. ADJUSTABLE T-BAR ASSEMBLY FOR MOUNTING POLES IN MIDDLE OF CEILING. UL LISTED. EACH POWER POLE SHOWN ON PLAN SHALL HAVE PROVISIONS FOR (2) DATA DROPS AND (1) VOICE DROP.
	8-GANG RECESSED FLOOR BOX (CAST-IN-PLACE), PROVIDE BRASS COVER PLATE WITH FLUSH ACCESS COVER SIMILAR TO LEGRAND SYSTEM: EVOLUTION SERIES CAT. #EFB8S-OG PROVIDE TWO(2) XLR JACKS, TWO(2) CAT6A TELECOMMUNICATIONS JACKS & TWO(2) 120V, 20A, DUPLEX RECEPTACLES
	COAX CABLE / TELEPHONE / CAT5 CABLE HANGING FREE AIR FROM CEILING OR LAYING ON FLOOR TO BE REMOVED COMPLETE TO SOURCE.
	METER
	CONDUIT, HOME RUN TO PANEL BOARD
	1 HOUR RATED FIRE WALL
	2 HOUR RATED FIRE WALL
	3 HOUR RATED FIRE WALL
WP WAP	WIRELESS ACCESS POINT, (2) CAT 6A DATA CABLES TO LOCATION INDICATED ON PLAN, OWNER SHALL PROVIDE SURGE PROTECTOR AND WAP DEVICE, THE ELECTRICAL CONTRACTOR SHALL INSTALL. SEE DETAIL 3 SHEET E5.02 WP - LISTED WEATHER-RESISTANT TYPE DEVICE
	EXISTING DATA OUTLET: DEVICE IS EXISTING TO REMAIN PROTECTED IN PLACE DURING DEMOLITION AND CONSTRUCTION. THIS SYMBOL INDICATES FLUSH MOUNTED DEVICE, (SM) BESIDE SYMBOL INDICATES SURFACE MOUNTED DATA OUTLET WHEN INDICATED ON DRAWING.
#D	STANDARD DATA OUTLET: MOUNTED 18" AFF UNLESS OTHERWISE NOTED. PROVIDE (2) CAT 6 DATA CABLES IN 1" CONDUIT TO ABOVE GRID CEILING. OUTLETS LOCATED BELOW HARD(GYPBOARD) CEILINGS, ROUTE 1" CONDUIT BACK TO TELEPHONE/DATA ROOM. #D = INDICATES NUMBER OF DATA CONNECTIONS WHEN SHOWN ON DRAWINGS IF OTHER THAN STANDARD (2) DROPS.
	DATA OUTLET MOUNTED ABOVE CEILING AT PIM, PROVIDE (2) CAT 6A DATA CABLE DROPS
D	DOOR CONTACT: SURFACE MOUNTED ON FRAME.
PIM	PANEL INTERFACE MODULE - ALLEGION SCHLAGE PIM400-1501. CONTRACTOR SHALL CONFIRM PLACEMENT OF PIM PRIOR TO ROUGH-IN AND INSTALLATION AND ADJUST FINAL LOCATION AS REQUIRED FOR COMPLETE COVERAGE. PROVIDE (2) CAT6A DATA CABLES.
RAM	REMOTE ANTENNA MODULE - ALLEGION SCHLAGE ANT400-REM-I/O AND MOUNTING BRACKET. CONTRACTOR SHALL CONFIRM PLACEMENT OF ANTENNA PRIOR TO ROUGH-IN AND INSTALLATION AND ADJUST FINAL LOCATION AS REQUIRED FOR COMPLETE COVERAGE. PROVIDE (2) CAT6A DATA CABLES.

SYMBOL	DESCRIPTION
J	JUNCTION BOX - WALL MOUNTED +##" - INDICATES MOUNTING HEIGHT OF DEVICE IN INCHES AFF (if given)
J	JUNCTION BOX - FLOOR MOUNTED
A	EXISTING SECURITY SENSOR - CEILING MOUNTED
K	KEYPAD FOR INTRUSTION DESTECTION SYSTEM. PROVIDE 2 GANG RECESSED OUTLET BOX 48"AFF.
M	MOTION DETECTOR - TYPE 1 - LONG RANGE. PROVIDE WALL MOUNT STANDARD OCTAGON BOX.
M	MOTION DETECTOR - TYPE 2 - MEDIUM RANGE. PROVIDE CEILING MOUNT STANDARD OCTAGON BOX.
M	MOTION DETECTOR - TYPE 3 - 360° RANGE. PROVIDE CEILING MOUNT STANDARD OCTAGON BOX.
	CEILING MOUNTED 360°CAMERA
WP	WALL MOUNTED CAMERA WP INDICATES WEATHERPROOF
	CEILING MOUNTED CAMERA
	FLOOR MOUNTED DATA RACK
	WALL MOUNTED DATA RACK
	PROJECTOR PAN, CEILING MOUNTED
S	EXISTING CEILING MOUNTED GENERAL ANNOUNCEMENT SPEAKER TO BE REMOVED AND PROTECTED INTERCOM SPEAKERS - BOGEN - SCD-2X2-VR
EA	CEILING MOUNTED ENHANCED AUDIO SPEAKER [EA]: CAFETERIA SPEAKERS - OWI-2x2-AMP-R2S61
S	WALL MOUNTED SPEAKER
	GROUND BUS, "CG" INDICATES CAMERA GROUND BAR, "TG" INDICATES TELECOMMUNICATIONS GROUND BAR, "E" INDICATES ELECTRICAL GROUND BAR
	HATCHING INDICATES EXISTING ITEMS TO BE DEMOLISHED. REMOVE DEVICE, EQUIPMENT, FIXTURE INDICATED, CIRCUIT, AND CONDUIT BACK TO SOURCE UNLESS OTHERWISE NOTED.
	DETAIL, SECTION OR PLAN NUMBER EX E-XXX DRAWING SHEET PLAN, DETAIL OR SECTION APPEARS ON ENLARGED PLAN EX E-XXX ELEVATION
#	KEYED NOTE - DEMOLITION WORK THIS PROJECT
#	KEYED NOTE - WORK THIS PROJECT
(X)	EXISTING EQUIPMENT/DEVICE
(R)	RELOCATED EQUIPMENT/DEVICE

TYPICAL ABBREVIATIONS:

A, AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BOF	BOTTOM OF FIXTURE
BRKR	BREAKER
C, CND	CONDUIT
CAB	CABINET
CAT	CATALOG
CL	CHLORINE
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CP	CONTROL PANEL
CR	CONTROL RELAY, CORROSION RESISTANT
CS	CONTROL SWITCH
CV	CONTROL VALVE
CT	CURRENT TRANSFORMER
CU	COPPER
EF	EXHAUST FAN
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EPRF	EXPLOSION PROOF
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FLA	FULL LOAD AMPS
FLUOR	FLUORESCENT
FLR	FLOOR
FWE	FURNISHED WITH EQUIPMENT
GEN	GENERATOR
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
Hz	HERTZ
IMC	INTERMEDIATE METALLIC CONDUIT
INCAND	INCANDESCENT
JB	JUNCTION BOX
K	THOUSAND
KCMIL	THOUSAND CIRCULAR MILLS
KVA	KILOVOLT AMPERE
KW	KILOWATTS
KWH	KILOWATT-HOURS
LP	LIGHTING PANEL, LIGHT POLE
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
N, NEUT	NEUTRAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
P	POLE
PA	PUBLIC ADDRESS
PB	PULL BOX, PUSH-BUTTON
PF	POWER FACTOR
PH, φ	PHASE
PIM	PROJECT INFORMATION MANAGEMENT
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PP	POWER PANEL, POWER POLE
PT	POTENTIAL TRANSFORMER
PWR	POWER
RECPT, RCP	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL CONDUIT
RM	ROOM
RTU	REMOTE TELEMETRY UNIT
SCR	DC MOTOR DRIVE
SH	SHEET
SM	SURFACE MOUNTED
SPEC	SPECIFICATION
SS	SELECTOR SWITCH
SST	STAINLESS STEEL
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCH GEAR
TEL	TELEPHONE
TPS	TWISTED PAIR SHIELDED
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UGND	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE, WATT
WH	WATT-HOUR
WP	WEATHERPROOF
XFMR	TRANSFORMER
(X)	EXISTING



NOTE:
DETAIL SHOWN FOR REFERENCE ONLY, NOT ALL DEVICES ARE INDICATED ON PLANS.

1 / E0.1 **Electrical Devices - Mounting Height Detail**
Not To Scale

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506

© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 W. ALLEN CRIBB
2-4-19

Renovations to:
M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL
LEGEND, DETAIL AND
ABBREVIATIONS

JOB NUMBER
18005
DRAWN BY
HGH
CHECKED BY
WAC
DATE
02-04-2019
REVISIONS

SHEET NUMBER
E0.1

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN FULL COMPLIANCE WITH NFPA, THE NORTH CAROLINA STATE BUILDING CODE, ALL LOCAL CODES AND ORDINANCES AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
2. ALL EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY-RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, FOR THE CONDITIONS OF INSTALLATION. ALL MATERIAL, EQUIPMENT AND DEVICES SHALL BE NEW CURRENT PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS. EQUIPMENT SHALL BE SUITABLE FOR ITS APPLICATION (E.G. WHEN INSTALLED OUTDOORS, IT SHALL BE WEATHERPROOF, ETC.)
3. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.
4. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.
5. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ADDITIONAL CIRCUITS SHALL BE INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.
6. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE CONTRACTOR SHALL PROVIDE DETAILS, METHODS, MATERIALS, ETC. FOR REVIEW PRIOR TO MAKING TEMPORARY CONNECTIONS. FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS INCLUDING CONTROL EQUIPMENT, MOTOR STARTERS, BRANCH AND FEEDER CIRCUIT BREAKERS, PANELBOARDS, TRANSFORMERS, ETC. FOR TEMPORARY POWER. COORDINATE WITH THE ELECTRICAL UTILITY COMPANY AS REQUIRED.
7. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.
8. ALL EQUIPMENT SHOWN DOTTED OR DASHED IS BY OTHERS OR IS EXISTING, AS NOTED.
9. ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL NOT BE STORED OUT OF DOORS, BUT SHALL BE STORED IN DRY PERMANENT SHELTERS. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST.
10. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
11. CIRCUIT LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF FEEDER AND BRANCH CIRCUIT RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.
12. UNLESS DIMENSIONED, DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES WITH OTHER TRADES. EXACT DEVICE LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL DRAWINGS OR DIMENSIONED ON THE ELECTRICAL DRAWINGS, VERIFY EXACT LOCATION WITH THE ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.
13. CONDUIT TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.
14. DEVICE BOXES SHOWN BACK-TO-BACK SHALL BE OFFSET A MINIMUM OF TWELVE (12) INCHES TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS.
15. BRANCH CIRCUIT HOMERUNS SHOWN ON DRAWINGS INDICATE PHASE CONDUCTORS, NEUTRAL, EQUIPMENT GROUND CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.
16. SEAL ALL CONDUIT OPENINGS THROUGH EXTERIOR BUILDING WALLS WATERTIGHT.
17. IN WET LOCATIONS AND EXTERIOR, ALL WIRING DEVICES SHALL BE WEATHER-RESISTANT LISTED WITH WEATHERPROOF WHILE IN USE COVER. LIGHTING FIXTURES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT INCLUDING 0 DEGREE BALLASTS FOR FLUORESCENT.
18. RACEWAYS PENETRATING FLOORS, CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKETIGHT.
19. RACEWAYS PENETRATING RATED FLOOR, CEILING OR WALL ASSEMBLIES SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE CORRESPONDING UNDERWRITERS LABORATORIES (OR OTHER APPROVED THIRD PARTY TESTING AGENCY) APPROVED AND LISTED FIRESTOPPING MATERIALS AND MANUFACTURER APPROVED INSTALLATION TECHNIQUES COMPLYING WITH ALL APPLICABLE CODES. SEE ARCHITECTURAL DRAWINGS FOR IDENTIFICATION OF RATED WALLS AND CEILINGS.
20. ALL RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE.
21. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.
22. PROVIDE AND PLACE ALL SLEEVES FOR CONDUITS PENETRATING WALLS, FLOORS, PARTITIONS, ETC. LOCATE ALL NECESSARY SLOTS FOR ELECTRICAL WORK AND FORM BEFORE CONCRETE IS POURED.
23. PATCHING OF WATERPROOFED SURFACES SHALL RENDER THE AREA OF THE PATCHING COMPLETELY WATERPROOF.
24. ALL MOTORS, DRY TYPE TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE CONNECTED TO THE CONDUIT SYSTEM BY MEANS OF A SHORT SECTION (18 INCH MINIMUM) OF FLEXIBLE CONDUIT UNLESS OTHERWISE INDICATED. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED INSIDE THE FLEXIBLE CONDUIT AND TERMINATE AT THE LOAD END WITH AN APPROVED GROUNDING CLAMP OR LUG.
25. SURFACE MOUNTED PANELBOARDS, JUNCTION, OUTLET AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.
26. CEILING MOUNTED DEVICES INSTALLED IN ACOUSTICAL TILE CEILING AREAS SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH RODS OF SUFFICIENT SIZE TO PREVENT VERTICAL MOVEMENT OF THE OUTLET BOX. BRIDGES ALONE ARE NOT ADEQUATE UNLESS SPECIFICALLY APPROVED. CEILING MOUNTED EXIT LIGHT FIXTURES SHALL BE INSTALLED LEVEL. DO NOT SUPPORT DEVICES FROM ACCOUSTICAL CEILING TILE.
27. EXCAVATION AND TRENCHING REQUIRED FOR THE INSTALLATION OF ELECTRICAL POWER AND TELECOMMUNICATIONS RACEWAYS SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 26 OF THE PROJECT SPECIFICATIONS.
28. PRIOR TO TRENCHING IN ANY AREA, THE CONTRACTOR SHALL CONTACT ELECTRICAL, COMMUNICATIONS/DATA/FIBER, CABLE TELEVISION, GAS AND WATER UTILITY PROVIDERS AND HAVE ALL UTILITIES IN THE AREA IDENTIFIED. DAMAGE TO ANY UNDERGROUND UTILITIES OR STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.
29. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED BY UNDERGROUND LINE MARKING TAPE LOCATED DIRECTLY ABOVE THE RACEWAY AT 6 TO 8 INCHES BELOW FINISHED GRADE. SEE SPECIFICATIONS SECTION 260553.
30. PROVIDE ADHESIVE BACKED RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER.
31. FINAL TYPED PANELBOARD DIRECTORIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS.
32. CONDUCTOR SIZING IS BASED ON 75 DEGREE C. COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C. WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C. CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.
33. DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL. IN THE CASE OF CONCEALED WORK, "COMPLETE" MEANS UNTIL ALL ROUGH PLASTERING OR MASONRY HAS BEEN COMPLETED.
34. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 1/2" MINIMUM RACEWAY.
35. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS WITH A TOTAL INSTALLED LENGTH GREATER THAN 75 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 50 FEET, I.E.; #12 AWG INCREASED TO #10 AWG FOR RECEPTACLE BRANCH CIRCUITS OVER 75 FEET TOTAL LENGTH (INCLUDING THE HOMERUN SEGMENT) AND HOMERUNS OVER 50 FEET.
36. COMMON NEUTRAL MULTIWIRE RECEPTACLE BRANCH CIRCUITS ARE NOT PERMITTED. PROVIDE SEPARATE, INDIVIDUAL NEUTRAL CONDUCTORS FOR MULTIWIRE BRANCH CIRCUITS.
37. KEEP CONDUCTOR SPLICES TO A MINIMUM. INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.
38. DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE ARCHITECT/ENGINEER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD.
39. DO NOT COMBINE BRANCH CIRCUIT HOMERUNS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
40. DO NOT CHANGE CIRCUITING SHOWN WITHOUT PERMISSION OF THE ARCHITECT/ENGINEER.
41. TROUGH TAPS SHALL BE AT SWITCH AMPACITY, UNLESS NOTED OTHERWISE.
42. INSTALL WIRING DEVICES AT HEIGHTS AS SHOWN ON THE DRAWINGS. ALSO COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECTURAL DRAWINGS AND CASEWORK DETAILS. IF CONFLICTING, ARCHITECTURAL DRAWINGS AND DETAILS SHALL GOVERN.
43. PROVIDE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL IN ACCORDANCE WITH THE NEC INCLUDING ALL ELECTRIC WATER COOLERS, EXTERIOR RECEPTACLES AND RECEPTACLES IN AREAS SUBJECT TO POSSIBLE WET CONDITIONS. ALL RECEPTACLES INSTALLED WITHIN 6 FEET OF A SINK SHALL BE GFI PROTECTED. ALL RECEPTACLES IN NON-RESIDENTIAL KITCHENS SHALL BE GFI PROTECTED.
44. CONNECT BATTERY PACK TYPE EMERGENCY AND EXIT LIGHTING FIXTURES TO THE UNSWITCHED LIGHTING CIRCUIT SERVING THE SPACE LIGHTED BY THE EMERGENCY AND EXIT FIXTURES. THESE CONNECTIONS ARE INTENTIONALLY NOT SHOWN TO MAINTAIN DRAWING FOR CLARITY.
45. COORDINATE LIGHTING FIXTURE LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. IF CONFLICTS ARE NOTED, REQUEST CLARIFICATION FROM THE ARCHITECT/ENGINEER BEFORE PROCEDING.
46. ADJACENT SWITCHES SHALL BE GANGED. INSTALL BARRIERS BETWEEN UNLIKE VOLTAGE SECTIONS.
47. SEPARATE NEUTRALS ARE REQUIRED FOR ALL DIMMED LIGHTING CIRCUITS.
48. WHERE THE DRAWINGS INDICATE A LIGHTING FIXTURE IS TO BE PROVIDED WITH SPECIAL FEATURES/SWITCHING (DIMMING, EMERGENCY BATTERY BALLAST, MULTI-LEVEL, ETC), THE CONTRACTOR SHALL PROVIDE THESE FIXTURES WITH THE APPROPRIATE BALLASTING TO ACCOMMODATE THE SPECIAL FEATURE. THE CONTRACTOR SHALL PROVIDE THE FIXTURES AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE WITH MODIFICATIONS AS REQUIRED BY DRAWING NOTES.
49. COORDINATE LOCATIONS OF PLUMBING, MECHANICAL, ELEVATOR, DATA AND TELEPHONE AND AUDIO/VISUAL EQUIPMENT AND OF OWNER-PROVIDED EQUIPMENT WITH THE RESPECTIVE CONTRACTORS AND VENDORS AND THE OWNER BEFORE ROUGH-IN. ADJUST LIGHTING FIXTURES, RECEPTACLES AND ELECTRICAL EQUIPMENT TO ACCOMMODATE THIS EQUIPMENT. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN
50. BEFORE COMMENCING WORK OR ORDERING MATERIALS, THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND VERIFY THE NAMEPLATE RATINGS OF ALL EQUIPMENT (MOTORS, HEATERS, COMPRESSORS, ETC.) AND ADJUST THE RATINGS OF THE ELECTRICAL EQUIPMENT (SWITCHES, FUSES, CIRCUIT BREAKERS, FEEDERS, ETC.) AS APPROPRIATE TO SERVE THIS EQUIPMENT.
51. ENERGIZE EQUIPMENT ONLY AFTER OBTAINING PERMISSION FROM THE CONTRACTOR PROVIDING THE EQUIPMENT.
52. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL UTILIZATION EQUIPMENT SHOWN ON THE DRAWINGS. VERIFY THE TYPE OF FINAL CONNECTION AND PROVIDE APPROPRIATE WIRING METHOD. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL, PLUMBING AND GENERAL CONTRACTORS, PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, TO VERIFY MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS ARE PROVIDED IN THE ELECTRICAL DESIGN. THE CONTRACTOR WILL NOT BE COMPENSATED FOR COSTS ASSOCIATED WITH CHANGING THE ELECTRICAL SYSTEMS TO MATCH UTILIZATION EQUIPMENT, EVEN IF THE ELECTRICAL WORK IS INSTALLED PER THE ELECTRICAL DRAWINGS.
53. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL FURNISH ALL STARTERS AND CONTROLS FOR THEIR EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL MOUNT STARTERS FURNISHED BY THE MECHANICAL AND PLUMBING CONTRACTORS, THE ELECTRICAL CONTRACTOR PROVIDE ALL SAFETY SWITCHES, WIRING AND CONNECTIONS TO LINE SIDE AND LOAD SIDE OF STARTERS AND SAFETY SWITCHES COMPLETE TO MECHANICAL EQUIPMENT. FOR RESISTANCE TYPE LOADS WHERE STARTERS OR CONTACTORS ARE NOT REQUIRED, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND CONNECTIONS COMPLETE TO EQUIPMENT. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL PROVIDE ALL CONTROL WIRING AND CONNECTIONS AND DEVICES FOR THEIR EQUIPMENT.
54. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL EQUIPMENT TERMINATIONS, PLUGS AND CORDSETS WITH VENDOR EQUIPMENT AND VERIFY ALL DEVICE LOCATIONS FOR SPECIALITY EQUIPMENT WITH CASEWORK PRIOR TO ROUGH-IN.
55. THE LAYOUT AND PLACEMENT OF ELECTRICAL DISTRIBUTION EQUIPMENT IN ELECTRICAL AND MECHANICAL EQUIPMENT ROOMS IS BASED ON PUBLISHED EQUIPMENT SIZES AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. DEVIATIONS FROM CONFIGURATIONS SHOWN IS THE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE NATIONAL ELECTRIC CODE REQUIRED CLEARANCES FOR ALL ELECTRICAL EQUIPMENT, PANELBOARDS, TRANSFORMERS, SAFETY SWITCHES, SWITCHBOARDS, ETC. COORDINATE RESOLUTION OF CONFLICTS WITH OTHER TRADES. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN.
56. COORDINATION WITH THE UTILITY COMPANY FOR PLACEMENT OF THE UTILITY'S FACILITIES AND THE CONTRACTOR'S SERVICE ENTRANCE RACEWAYS AND CONNECTIONS TO THE CONTRACTOR'S SERVICE ENTRANCE CONDUCTORS IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
57. TELECOMMUNICATIONS AND DATA CABLES WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.
58. PROVIDE TELEPHONE, FIBER AND DATA SERVICE ENTRANCE CONDUIT IN SIZES AND LOCATIONS FOR MOBILE UNITS AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY THE OWNER AND THE SERVICE UTILITIES. UTILITY SERVICE ENTRANCE CABLES WILL BE PROVIDED AND INSTALLED BY THE OWNER'S SERVICE UTILITIES. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.
59. EXACT SPACING OF SMOKE AND HEAT DETECTORS AND A/V DEVICES SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE WITH POSITIONS SHOWN ON THE DRAWINGS. DETECTOR SPACING IS BASED UPON NFPA 72 INCLUDING APPENDIX A. SLIGHT ADJUSTMENTS MAY BE MADE IN SPACING IF REQUIRED BY FIELD CONDITIONS, BUT SPACING SHALL NOT EXCEED ADA, NFPA AND EQUIPMENT MANUFACTURERS SPACING CRITERIA. DO NOT INSTALL SMOKE DETECTORS WITHIN 3 FEET OF SUPPLY AIR DIFFUSERS OR RETURN GRILLES. PROVIDE FLEX CONDUIT CONNECTION TO SMOKE AND HEAT DETECTORS OF ADEQUATE LENGTH TO ALLOW HORIZONTAL ADJUSTMENT OF FOUR FEET FROM POSITION INDICATED ON DRAWINGS.
60. INSTALLATION INFORMATION PACKED WITH LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.
61. SAFETY: COMPLY WITH OSHA AND NEC ARC FLASH PROTECTION REQUIREMENTS.
62. ALL SWITCHES, RECEPTACLE AND LIGHTS SHALL COMPLY WITH ANSI 117.2 FOR ADA REQUIREMENTS.
63. FURNISH SHUNT TRIP CIRCUIT BREAKERS FOR ELECTRICAL FOOD SERVICE EQUIPMENT INSTALLED UNDER THE EXHAUST HOOD. CONNECT TO DE-ENERGIZE THESE UNITS UPON ACTIVATION OF THE EXHAUST HOOD FIRE SUPPRESSION SYSTEM. COORDINATE CONNECTIONS WITH THE FOOD SERVICE EQUIPMENT CONTRACTOR.
64. PROVIDE SEAL-OFF FITTINGS FOR ALL CONDUITS ENTERING OR LEAVING REFRIGERATED WALK-IN BOXES.
65. THE ELECTRICAL CONTRACTOR AND ALL SUB CONTRACTORS WORKING FOR THE ELECTRICAL CONTRACTOR ARE RESPONSIBLE FOR COMMISSIONING EACH SYSTEM INDICATED IN THESE DRAWINGS. THE ELECTRICAL CONTRACTOR AND ALL SUB CONTRACTORS WORKING FOR THE ELECTRICAL CONTRACTOR ARE RESPONSIBLE FOR PROVIDING A COMPLETE OPERATIONAL SYSTEM TO OWNER. THE SYSTEMS WILL NOT BE CONSIDERED OPERATIONAL UNTIL THE OWNER HAS APPROVED EACH SYSTEM.
66. INSTALL COLOR CODED CEILING TACKS IN ACOUSTICAL TILE CEILINGS OR COLOR CODED TAPE ON CEILING GRID TO IDENTIFY LOCATION OF ELECTRICAL EQUIPMENT, DISCONNECTS, LIGHTING CONTROLLERS AND POWER PACKS ETC... THAT REQUIRE REGULAR MAINTENANCE OR ARE PART OF A LIFE SAFETY SYSTEM. DOTS SHALL BE PLACED ON CEILING GRID.

DEMOLITION NOTES

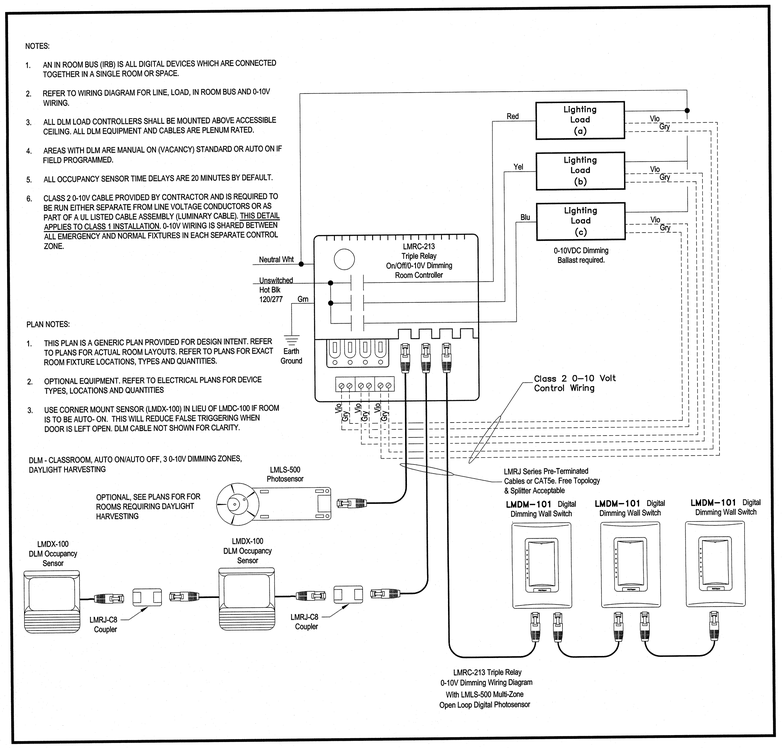
1. SELECTIVE ELECTRICAL DEMOLITION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AS DESCRIBED HEREIN AND AS SHOWN ON THE CONTRACT DRAWINGS. GROSS DEMOLITION WILL BE PROVIDED BY THE GENERAL CONTRACTOR. IDENTIFY ACTIVE UTILITIES, AND AT THE APPROPRIATE TIME, DISCONNECT AND CAP OFF SUCH UTILITIES AND PROVIDE EXPERIENCED PERSONNEL ON SITE DURING GENERAL CONTRACTOR DEMOLITION OPERATIONS TO PERFORM SUCH OPERATIONS AND RESOLVE ISSUES. REMOVE MATERIALS NOTED FOR SALVAGE AND REUSE. IDENTIFY AND MARK WIRING AND DEVICES TO REMAIN FOR THE GENERAL CONTRACTOR.
2. THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND CARRY OUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL WIRING DEVICES, BOXES, FIXTURES, EXPOSED ABANDONED RACEWAYS, HANGARS, ETC., AND THOSE MADE OBSOLETE BY THESE ALTERATIONS AND AS SHOWN ON THE ELECTRICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY ELECTRICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE OWNER OR ARCHITECT/ENGINEER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS MAY EXIST.
3. REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.
4. ALL EXISTING ELECTRICAL EQUIPMENT AND DEVICES SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.
5. VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS SHOWN ON DRAWINGS.
6. VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.
7. DISCONNECT AND/OR DE-ENERGIZE ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.
8. PROVIDE TEMPORARY AND/OR PERMANENT WIRING AND CONNECTIONS AS SHOWN AND/OR AS REQUIRED BY CONDITIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, AND WHEN SUCH WORK IS SPECIFICALLY APPROVED BY THE OWNER AND PERMITTED BY REGULATORY AUTHORITIES, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.
9. EXISTING ELECTRICAL SERVICE: COORDINATE POWER OUTAGES WITH THE OWNER AND UTILITY COMPANY. MAINTAIN EXISTING SYSTEMS IN SERVICE. DISABLE SYSTEMS ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM THE OWNER AT LEAST 24 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. MINIMIZE OUTAGE DURATION. MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA.
10. CONTINUOUS SERVICE IS REQUIRED ON ALL CIRCUITS AND OUTLETS AFFECTED BY THESE CHANGES, EXCEPT WHERE THE OWNER WILL PERMIT AN OUTAGE FOR A SPECIFIC TIME. OBTAIN OWNER'S CONSENT BEFORE REMOVING ANY CIRCUIT FROM CONTINUOUS SERVICE.
11. PROTECT ALL EXISTING TELEPHONE, DATA, LIFE SAFETY SYSTEMS, FIRE ALARM, SECURITY, ACCESS CONTROL AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ARCHITECT/ENGINEER IN WRITING IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
12. WHERE ELECTRICAL SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL BE PROTECTED FROM DAMAGE AND REMAIN OR BE SUITABLY RELOCATED UTILIZING MATCHING SIZE AND TYPE MATERIALS AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE ARCHITECT/ENGINEER IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.
13. EXISTING FIRE ALARM SYSTEM: COORDINATE WORK WITH THE OWNER'S FIRE ALARM SYSTEM VENDOR AND MAINTAIN THE EXISTING SYSTEM IN SERVICE. DISABLE SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. NOTIFY THE OWNER AND LOCAL FIRE SERVICE AT LEAST 24 HOURS BEFORE PARTIALLY OR COMPLETELY DISABLING SYSTEM. LIMIT OUTAGES TO NORMAL BUSINESS HOURS ONLY AND MINIMIZE OUTAGE DURATION. MAKE TEMPORARY CONNECTIONS TO MAINTAIN SERVICE IN AREAS ADJACENT TO WORK AREA.
14. MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.
15. ENDS OF ALL CONDUITS TO REMAIN SHALL BE TIGHTLY PLUGGED TO EXCLUDE DUST AND MOISTURE WHILE THE BUILDING IS UNDER RENOVATION.
16. PROTECT EXISTING CIRCUITS TO REMAIN AND EXTEND AS REQUIRED UTILIZING MATCHING CONDUCTORS AND CONDUIT SIZE AND TYPE.
17. SECURE ALL CIRCUITS, RACEWAYS, CABLE AND CONDUCTORS THAT, AS A RESULT FROM THIS CONSTRUCTION, ARE ABANDONED OR UNUSED. REMOVE UNUSED EXPOSED CONDUIT AND WIRING BACK TO POINT OF CONCEALMENT INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILINGS. REMOVE UNUSED WIRING IN CONCEALED CONDUITS BACK TO SOURCE OR NEAREST POINT OF USAGE. BLANK ABANDONED KNOCKOUTS IN REMAINING BOXES. INSTALL BLANK PLATES FOR ALL UNUSED OUTLETS THAT WILL REMAIN AS A RESULT OF THIS CONSTRUCTION. ALL SUCH WORK SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
18. TRACE OUT EXISTING WIRING THAT IS TO BE RELOCATED OR REMOVED AND PERFORM THE RELOCATION OR REMOVAL WORK AS REQUIRED FOR A COMPLETE OPERATING AND SAFE SYSTEM.
19. RECONNECT EXISTING CIRCUITS SEPARATED AS A RESULT OF THIS CONSTRUCTION.
20. EXTEND EXISTING SWITCH LEGS TO NEW SWITCH LOCATIONS AS SHOWN AND/OR REQUIRED.
21. DELIVER ALL REMOVED AND SALVAGED LIGHTING FIXTURES, WIRING DEVICES, FIRE ALARM DEVICES, SPEAKERS, ETC., TO THE OWNER, OR AT THE OWNER'S OPTION, DISPOSE OF PROPERLY OFF SITE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. FEES ASSOCIATED WITH DISPOSAL SHALL BE INCLUDED IN THE CONTRACTOR'S BASE BID.
22. REMOVE ALL FLUSH MOUNTED DEVICES THAT CONFLICT WITH NEW CONSTRUCTION AND SECURE THEIR ASSOCIATED BRANCH CIRCUITS.
23. COORDINATE WITH THE OTHER TRADES, PRIOR TO BID, AND INCLUDE IN THE BASE BID THE ELECTRICAL DISCONNECTION OF ANY EQUIPMENT BEING DEMOLISHED, EVEN IF NOT EXPLICITLY SHOWN. UNLESS NOTED OTHERWISE, REMOVE ALL DEMOLISHED EQUIPMENT FROM THE PROPERTY AND IDENTIFIED IN THE ELECTRICAL DRAWINGS.
24. THESE DRAWINGS ARE COMPILED BY THE ARCHITECT/ENGINEER FROM THE OWNER'S RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CON

NOTES:

1. AN IN ROOM BUS (IRB) IS ALL DIGITAL DEVICES WHICH ARE CONNECTED TOGETHER IN A SINGLE ROOM OR SPACE.
2. REFER TO WIRING DIAGRAM FOR LINE, LOAD, IN ROOM BUS AND 0-10V WIRING.
3. ALL DLM LOAD CONTROLLERS SHALL BE MOUNTED ABOVE ACCESSIBLE CEILING. ALL DLM EQUIPMENT AND CABLES ARE PLENUM RATED.
4. AREAS WITH DLM ARE MANUAL ON (VACANCY) STANDARD OR AUTO ON IF FIELD PROGRAMMED.
5. ALL OCCUPANCY SENSOR TIME DELAYS ARE 20 MINUTES BY DEFAULT.
6. CLASS 2 0-10V CABLE PROVIDED BY CONTRACTOR AND IS REQUIRED TO BE RUN EITHER SEPARATE FROM LINE VOLTAGE CONDUCTORS OR AS PART OF A UL LISTED CABLE ASSEMBLY (LUMINARY CABLE). THIS DETAIL APPLIES TO CLASS 1 INSTALLATION. 0-10V WIRING IS SHARED BETWEEN ALL EMERGENCY AND NORMAL FIXTURES IN EACH SEPARATE CONTROL ZONE.

PLAN NOTES:

1. THIS PLAN IS A GENERIC PLAN PROVIDED FOR DESIGN INTENT. REFER TO PLANS FOR ACTUAL ROOM LAYOUTS. REFER TO PLANS FOR EXACT ROOM FIXTURE LOCATIONS, TYPES AND QUANTITIES.
2. OPTIONAL EQUIPMENT. REFER TO ELECTRICAL PLANS FOR DEVICE TYPES, LOCATIONS AND QUANTITIES
3. USE CORNER MOUNT SENSOR (LMDX-100) IN LIEU OF LMDC-100 IF ROOM IS TO BE AUTO- ON. THIS WILL REDUCE FALSE TRIGGERING WHEN DOOR IS LEFT OPEN. DLM CABLE NOT SHOWN FOR CLARITY.



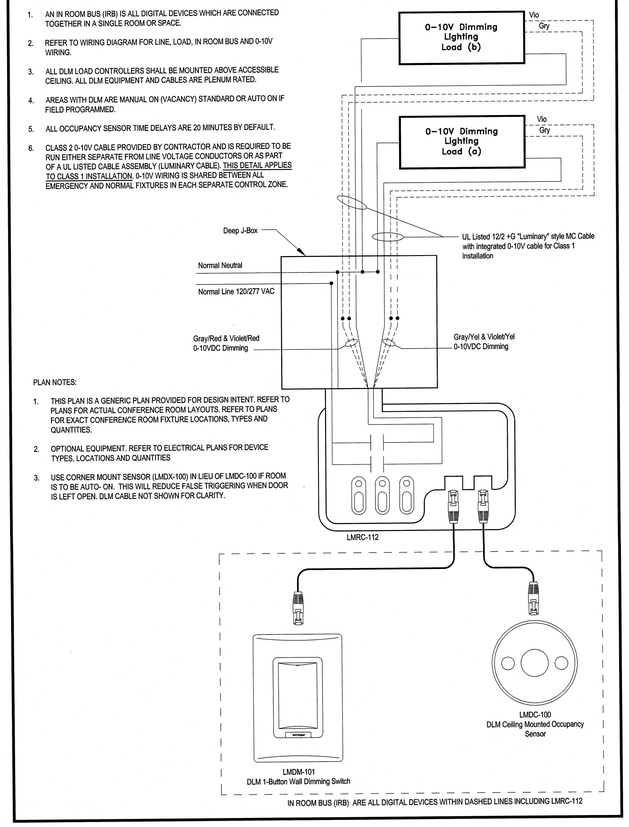
1 E0.03 **Occupancy Sensor Classroom Wiring Diagram**
Not to Scale

NOTES:

1. AN IN ROOM BUS (IRB) IS ALL DIGITAL DEVICES WHICH ARE CONNECTED TOGETHER IN A SINGLE ROOM OR SPACE.
2. REFER TO WIRING DIAGRAM FOR LINE, LOAD, IN ROOM BUS AND 0-10V WIRING.
3. ALL DLM LOAD CONTROLLERS SHALL BE MOUNTED ABOVE ACCESSIBLE CEILING. ALL DLM EQUIPMENT AND CABLES ARE PLENUM RATED.
4. AREAS WITH DLM ARE MANUAL ON (VACANCY) STANDARD OR AUTO ON IF FIELD PROGRAMMED.
5. ALL OCCUPANCY SENSOR TIME DELAYS ARE 20 MINUTES BY DEFAULT.
6. CLASS 2 0-10V CABLE PROVIDED BY CONTRACTOR AND IS REQUIRED TO BE RUN EITHER SEPARATE FROM LINE VOLTAGE CONDUCTORS OR AS PART OF A UL LISTED CABLE ASSEMBLY (LUMINARY CABLE). THIS DETAIL APPLIES TO CLASS 1 INSTALLATION. 0-10V WIRING IS SHARED BETWEEN ALL EMERGENCY AND NORMAL FIXTURES IN EACH SEPARATE CONTROL ZONE.

PLAN NOTES:

1. THIS PLAN IS A GENERIC PLAN PROVIDED FOR DESIGN INTENT. REFER TO PLANS FOR ACTUAL CONFERENCE ROOM LAYOUTS. REFER TO PLANS FOR EXACT CONFERENCE ROOM FIXTURE LOCATIONS, TYPES AND QUANTITIES.
2. OPTIONAL EQUIPMENT. REFER TO ELECTRICAL PLANS FOR DEVICE TYPES, LOCATIONS AND QUANTITIES
3. USE CORNER MOUNT SENSOR (LMDX-100) IN LIEU OF LMDC-100 IF ROOM IS TO BE AUTO- ON. THIS WILL REDUCE FALSE TRIGGERING WHEN DOOR IS LEFT OPEN. DLM CABLE NOT SHOWN FOR CLARITY.



3 E0.03 **Occupancy Sensor Office - 2 Wiring Diagram**
Not to Scale

NOTE:
OCCUPANCY SENSOR WIRING SCHEMATICS ARE PROVIDED TO INDICATE SWITCHING FUNCTION(S) REQUIRED. COMPONENTS AND CONNECTIONS BETWEEN COMPONENTS ARE REPRESENTATIVE ONLY AND MAY NOT BE APPLICABLE FOR ALL MANUFACTURER'S DEVICES. CONSULT ACTUAL APPROVED DEVICE MANUFACTURER APPLICATION INFORMATION AND INSULATION INSTRUCTIONS FOR COMPONENTS AND WIRING REQUIRED BEFORE ROUGH-IN AND INSTALLING SYSTEMS. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED WIRING AND DEVICES REQUIRED TO PROVIDE A COMPLETE AND OPERATION LIGHTING CONTROL SYSTEM.

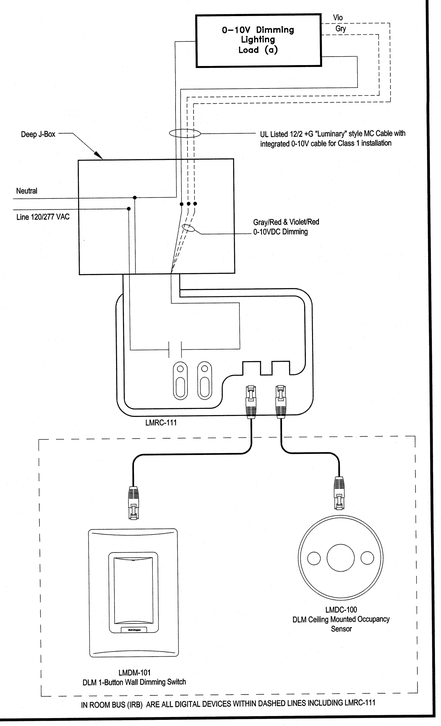
CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.

NOTES:

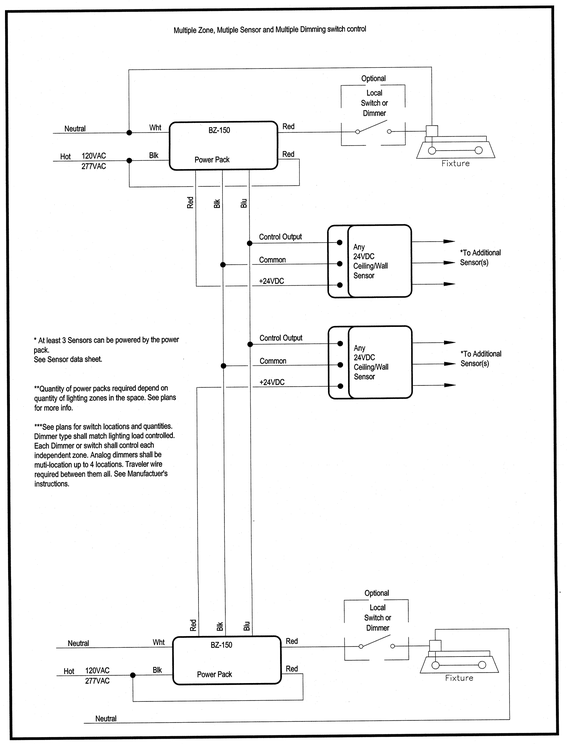
1. AN IN ROOM BUS (IRB) IS ALL DIGITAL DEVICES WHICH ARE CONNECTED TOGETHER IN A SINGLE ROOM OR SPACE.
2. REFER TO WIRING DIAGRAM FOR LINE, LOAD, IN ROOM BUS AND 0-10V WIRING.
3. ALL DLM LOAD CONTROLLERS SHALL BE MOUNTED ABOVE ACCESSIBLE CEILING. ALL DLM EQUIPMENT AND CABLES ARE PLENUM RATED.
4. AREAS WITH DLM ARE MANUAL ON (VACANCY) STANDARD OR AUTO ON IF FIELD PROGRAMMED.
5. ALL OCCUPANCY SENSOR TIME DELAYS ARE 20 MINUTES BY DEFAULT.
6. CLASS 2 0-10V CABLE PROVIDED BY CONTRACTOR AND IS REQUIRED TO BE RUN EITHER SEPARATE FROM LINE VOLTAGE CONDUCTORS OR AS PART OF A UL LISTED CABLE ASSEMBLY (LUMINARY CABLE). THIS DETAIL APPLIES TO CLASS 1 INSTALLATION. 0-10V WIRING IS SHARED BETWEEN ALL EMERGENCY AND NORMAL FIXTURES IN EACH SEPARATE CONTROL ZONE.

PLAN NOTES:

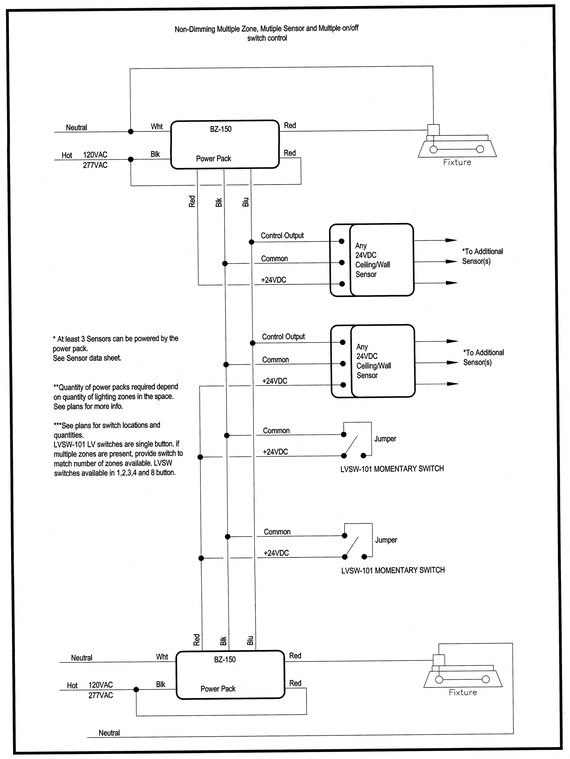
1. THIS PLAN IS A GENERIC PLAN PROVIDED FOR DESIGN INTENT. REFER TO PLANS FOR ACTUAL ROOM LAYOUTS. REFER TO PLANS FOR EXACT ROOM FIXTURE LOCATIONS, TYPES AND QUANTITIES.
2. OPTIONAL EQUIPMENT. REFER TO ELECTRICAL PLANS FOR DEVICE TYPES, LOCATIONS AND QUANTITIES
3. USE CORNER MOUNT SENSOR (LMDX-100) IN LIEU OF LMDC-100 IF ROOM IS TO BE AUTO- ON. THIS WILL REDUCE FALSE TRIGGERING WHEN DOOR IS LEFT OPEN. DLM CABLE NOT SHOWN FOR CLARITY.



2 E0.3 **Occupancy Sensor Office -1 Wiring Diagram**
Not To Scale



4 E0.03 **Occupancy Sensor Schematics**
Not to Scale



5 E0.03 **Occupancy Sensor Schematics**
Not to Scale

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506

© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

REGISTERED PROFESSIONAL ENGINEER W. ALLEN CBHF SEAL 023311
2-4-19

Renovations to:
M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL DETAILS

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER
E0.3

DEMOLITION KEYED NOTES THIS SHEET ONLY

1. (X)PTAC: DISCONNECT CONDUIT AND CONDUCTORS FROM PTAC, PROTECT DISCONNECT, CONDUIT AND CONDUCTORS FOR RE-CONNECTION.
2. (X)PTAC: DISCONNECT CONDUIT AND CONDUCTORS FROM PTAC AND PROTECT IN PLACE, PROTECT BREAKER IN EXISTING PANEL.
3. (X)PTAC: DISCONNECT CONDUIT AND CONDUCTORS FROM PTAC AND PROTECT IN PLACE, REMOVE 90A, 2 POLE BREAKER IN EXISTING PANEL.
4. EXTERIOR CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL REMAIN PROTECTED AND IN PLACE DURING DEMOLITION AND CONSTRUCTION. CAMERAS SHALL BE FULLY OPERATIONAL AT THE END OF CONSTRUCTION.

2 Electrical Demolition Plan
E1.00 scale: 1" = 20'-0"

TRUE PLAN NORTH

0 10' 20' 40' 1" = 20'-0"

(X)PTAC02 D.S. (X)60A/2/3R, W/ 60AF 1

(X)PTAC01 D.S. (X)60A/2/3R, W/ 60AF 1

2 (X)PTAC02

(X)PANEL

3 (X)PANEL (X)PTAC05

(X)PANEL 3 (X)PTAC06

4 WP

4" CLF

LP

LIGHT POLE

EX. 12" PINE

ELEC EX. 12" OAK

ELECTRICAL CONTRACTOR SHALL PROVIDE UNDERGROUND CONDUIT FROM MOBILE UNIT PANELS. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF NEW DIP POLE WITH DUKE POWER PRIOR TO TRENCHING AND INSTALLATION.

WELL

PTAC02 D.S. (X)60A/2/3R, W/ 60AF 1

PTAC01 D.S. (X)60A/2/3R, W/ 60AF 1

2 PTAC03

(X)PANEL

2#6 & 1#10GND-3/4"CND

TO (X)BREAKER IN (X)PANEL

PTAC03 D.S. 60A/2/3R, W/ 60AF

(X)PANEL (X)PANEL

3 2 PTAC05 2 PTAC06

WP

2#6 & 1#10GND-3/4"CND

PTAC05 D.S. 60A/2/3R, W/ 60AF

PTAC05 D.S. 60A/2/3R, W/ 60AF

DUKE POWER WILL PROVIDE DIP POLE AT BACK OF PROPERTY TO BE FED FROM THIS (X)POWER POLE FOR FEED TO TEMPORARY MOBILE UNITS

2 E1.00 DEMOLITION PLAN

WOOD BOLLARD

5' S/W

4"

8" PVC

2"

FP

ROUTE CND FROM EXTERIOR ENCLOSURE, ALONG UNDERSIDE OF MOBILE UNIT AND PENETRATE FLOOR INTO MOBILE UNIT, FIELD VERIFY PENETRATION INTO MOBILE UNIT WITH EQUIPMENT IN IT ROOM

A2

DATA/VOICE/SPEAKER ENCLOSURE

FIRE ALARM ENCLOSURE

4" PVC

4" RPZ

CAPPED 4" MAIN

3 E-100 PANEL IU-B WP GFI

PANEL MU-A MU-A-10

4 E-100

FIRE ALARM ENCLOSURE

DATA/VOICE/SPEAKER ENCLOSURE

UTILITY PAD MOUNTED TRANSFORMER, PROVIDED BY UTILITY, ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF TRANSFORMER WITH UTILITY PRIOR TO ROUGH-IN AND INSTALLATION

3"CND FROM BUILDING BELOW GRADE FROM MOBILE UNIT E IT RM TO MOBILE UNITS F & G IT ROOMS, PROVIDE (1) 6 STRAND SINGLE MODE FIBER, (1) 25 PAIR COPPER (VOICE), (1) 25 PAIR SHIELDED COPPER (SPEAKER)

3"Ø CONDUIT ABOVE CEILING

1"Ø CONDUIT ABOVE CEILING

1"CND FROM BUILDING BELOW GRADE FROM MOBILE UNIT E IT RM TO MOBILE UNITS F & G IT ROOMS, PROVIDE F.A. CABLE

BENCH

CONTAINER BOX

CONTAINER BOX 4"

DUGOUT

ELEC

PP

WV

4"

3 EQUIPMENT RACK DETAIL
E1.00 Not To Scale

PANEL MU1 NEMA 3R, LOCKABLE

PANEL MU2 NEMA 3R, LOCKABLE

DUPLEX GFI OUTLET WITH WEATHERPROOF COVER

PANEL MU1 NEMA 3R, LOCKABLE

2'x6'x5 1/4" MARINE GRADE, ELECTRICAL CONTRACTOR SHALL VERIFY WIDTH OF PANEL RACK WITH EQUIPMENT. (MTG HARDWARE SHALL BE S.S.)

(2) 6"x6" MARINE GRADE, ELECTRICAL CONTRACTOR RESPONSIBLE FOR SIZING EQUIPMENT RACK. ALL HARDWIRE SHALL BE STAINLESS STEEL

6'-0"

GRADE

2'-0"

TO MOBILE UNITS FROM PAD MOUNTED TRANSFORMER

TO MOBILE UNIT E

TO MOBILE UNIT H

CONCRETE BASE, TYPICAL ALL POSTS

4 TELECOM DUCTBANK SECTION
E1.00 Not To Scale

FINISHED GRADE

36" MIN.

MARKER TAPE 6" BELOW FINISHED GRADE

PROVIDE (1) 3"Ø CONDUIT EACH WITH (3) 1" CELL FABRIC INNER DUCT PRE-LUBRICATED WITH PULL TAPE

PROVIDE (1) 1"Ø CONDUIT WITH PULL TAPE

6" MIN.

KEYED NOTES THIS SHEET ONLY

1. PTAC: CONNECT CONDUIT AND CONDUCTORS REMOVED AND PROTECTED DURING DEMOLITION.
2. PTAC: PROVIDE 60A, 2 POLE BREAKER IN EXISTING PANEL, CONNECT CONDUIT AND CONDUCTORS REMOVED AND PROTECTED DURING DEMOLITION.
3. EXTERIOR CAMERAS: CONTRACTOR SHALL VERIFY CAMERA IS OPERATIONAL.

ALTERNATE KEYED NOTE

A2 MOBILE UNITS: ALL SYSTEMS SECURITY INFRASTRUCTURE SHALL BE INCLUDED IN ALTERNATE #2.

1 Site Plan - Electrical
E1.00 scale: 1" = 20'-0"

TRUE PLAN NORTH

0 10' 20' 40' 1" = 20'-0"

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506

© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-6506

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023311 WILLIAM A. CBHF ENGINEER, PE W. ALLEN, JR.

2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

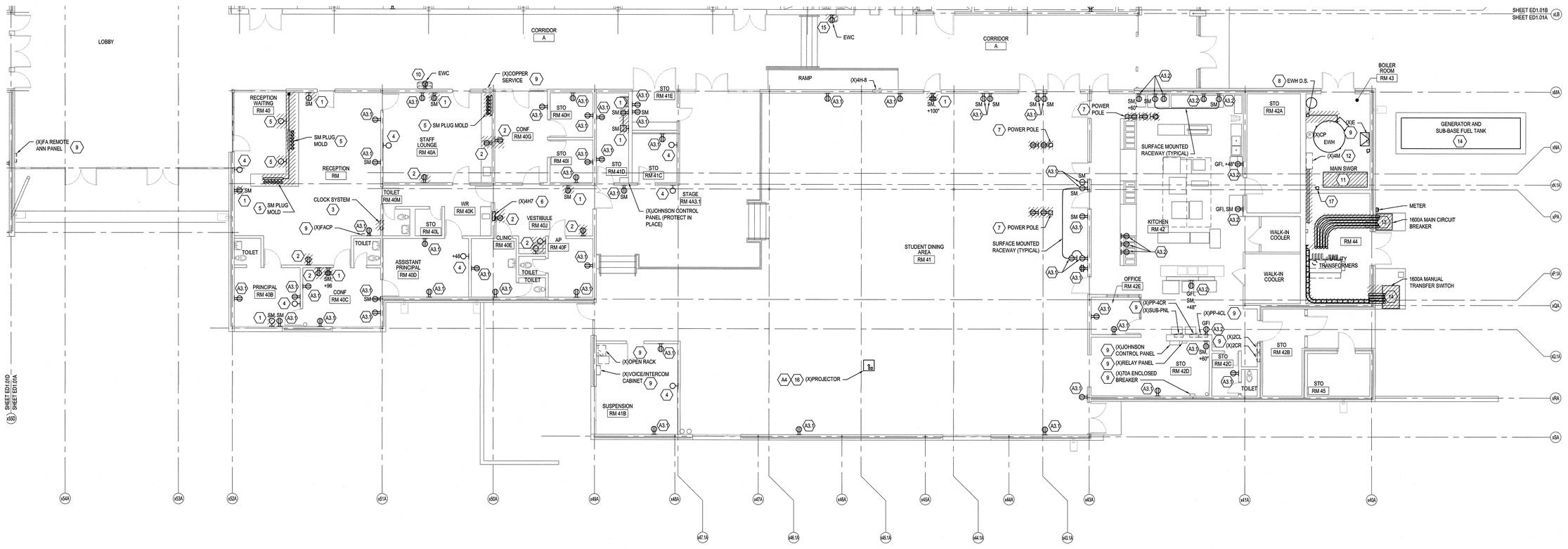
SITE PLAN - ELECTRICAL DEMOLITION, NEW WORK AND DETAILS

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E1.00

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



KEYED NOTES THIS SHEET ONLY

1. SURFACE DUPLEX RECEPTACLE: REMOVE RECEPTACLE AND BOX, REMOVE SURFACE RACEWAY AND CONDUCTORS TO SOURCE AND LABEL BREAKER AS SPARE. IF OTHER LOADS ARE FED FROM THIS CIRCUIT REMOVE TO NEAREST POINT OF USE AND PROTECT REMAINING CIRCUIT. REMAINING CIRCUIT SHALL BE COMPLETELY OPERATIONAL AFTER DEMOLITION.
2. DUPLEX RECEPTACLE: REMOVE RECEPTACLE AND BOX, REMOVE CONDUIT AND CONDUCTORS TO SOURCE AND LABEL BREAKER AS SPARE. IF OTHER LOADS ARE FED FROM THIS CIRCUIT REMOVE TO NEAREST POINT OF USE AND PROTECT REMAINING CIRCUIT. REMAINING CIRCUIT SHALL BE COMPLETELY OPERATIONAL AFTER DEMOLITION.
3. CLOCK SYSTEM: REMOVE CLOCK SYSTEM PANEL AND ALL CONDUIT AND CABLES. REMOVE ALL CEILING AND WALL MOUNTED CLOCKS THROUGHOUT THE SCHOOL AS INDICATED ON PLANS.
4. BLANK COVERPLATE: REMOVE COVER AND PROVIDE AND INSTALL BRUSHED STAINLESS BLANK COVER.
5. CASEWORK: REMOVE ALL SURFACE MOUNTED RECEPTACLES AND PLUGMOLD, REMOVE SURFACE RACEWAY TO SOURCE OR NEAREST JUNCTION POINT.
6. FLUSH PANELBOARD: REMOVE PANELBOARD. LABEL ALL BRANCH CIRCUITS PRIOR TO DISCONNECTION FROM PANEL AND PROTECT IN PLACE UNLESS LOAD IS SPECIFICALLY NOTED ON PLAN TO BE REMOVED. BRANCH CIRCUITS SHALL BE RECONNECTED TO NEW PANEL LOCATION, SEE DRAWING E1.01A FOR NEW LOCATION.
7. POWER POLE: REMOVE CONDUCTORS TO ABOVE CEILING AND PROTECT FOR REUSE. REMOVE POWER POLE AND BOXES.
8. WATER HEATER: REMOVE DISCONNECT, REMOVE CONDUIT AND CONDUCTORS COMPLETE FROM WATER HEATER TO SOURCE.
9. EQUIPMENT: PROTECT IN PLACE, EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
10. EWC: REMOVE FACE PLATE AND RECEPTACLE, REMOVE CONDUCTORS COMPLETE TO SOURCE, PROTECT BOX AND CONDUIT FOR RECONNECTION. REMOVE EXISTING BREAKER FEEDING EWC AND REPLACE WITH GFI BREAKER.
11. MAIN SWGR: DISCONNECT CONDUIT AND CONDUCTORS FROM UTILITY, LABEL ALL BRANCH CIRCUITS PRIOR TO DISCONNECTION FROM MAIN SWGR AND PROTECT IN PLACE UNLESS LOAD IS SPECIFICALLY NOTED ON PLAN TO BE REMOVED. SEE SHEET E6.01 FOR ADDITIONAL INFORMATION.
12. SURFACE PANELBOARD: DISCONNECT PANEL FEEDER CONDUIT AND CONDUCTORS, REMOVE COMPLETE TO UTILITY SOURCE AND PROTECT PANEL FOR CONNECTION TO NEW SWITCHGEAR.
13. CIRCUIT BREAKER: REMOVE CIRCUIT BREAKER, CONDUIT AND CONDUCTORS COMPLETE FROM UTILITY TO MANUAL TRANSFER SWITCH. CONCEALED/UNDERGROUND CONDUIT SHALL REMAIN ABANDONED IN PLACE. SEE SHEET E6.01 FOR ADDITIONAL INFORMATION.
14. GENERATOR AND MTS: GENERATOR AND MTS IS THE PROPERTY OF NEW HANOVER COUNTY. PROTECT GENERATOR IN PLACE, REMOVE MTS AND DELIVER TO NEW HANOVER COUNTY SCHOOLS FOR STORAGE. NEW HANOVER COUNTY SCHOOLS WILL DELIVER TO NEW HANOVER COUNTY AT A LATER DATE. SEE SHEET E6.01 FOR ADDITIONAL INFORMATION.
15. EWC: REMOVE FACE PLATE, RECEPTACLE, REMOVE CONDUCTORS COMPLETE TO SOURCE AND PROTECT BREAKER. PROVIDE BLANK FACE PLACE.
16. PROJECTOR: PROJECTOR SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT RECEPTACLE CIRCUIT, CONDUIT AND CONDUCTORS FOR RELOCATION.
17. BREAKER: DISCONNECT BREAKER CONDUIT AND CONDUCTORS, REMOVE COMPLETE TO UTILITY SOURCE AND PROTECT BREAKER FOR CONNECTION TO NEW SWITCHGEAR. SEE SHEET E6.01 FOR ADDITIONAL INFORMATION.

ALTERNATE KEYED NOTES

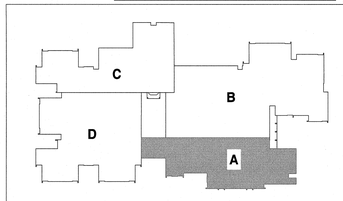
- A3.1 DUPLEX RECEPTACLES: REMOVE FACE PLATE AND RECEPTACLE, PROTECT BOX, CONDUIT AND CONDUCTORS FOR RECONNECTION.
- A3.2 GFI DUPLEX RECEPTACLES: REMOVE FACE PLATE AND RECEPTACLE, PROTECT BOX, CONDUIT AND CONDUCTORS FOR RECONNECTION.
- A4 PROJECTOR: PROJECTOR SHALL BE REMOVED BY A QUALIFIED VENDOR AND TURNED OVER TO OWNER. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT RECEPTACLE CIRCUIT, CONDUIT AND CONDUCTORS FOR RECONNECTION.

NOTE

1. ELECTRICAL CONTRACTOR SHALL SECURE ALL CABLES, CONDUIT AND BOXES LOCATED ABOVE CEILING IN PLACE THAT ARE TO REMAIN OR TO BE REUSED AND FASTENED PER NEC.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED SURFACE MOUNTED RACEWAY ON WALLS AND FLOORS.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / ED1.01A **Demolition Power Floor Plan - Area A**

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

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION POWER FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED1.01A

SEAL 023311 ENGINEER W. ALLEN CRIBB

2–4–19

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

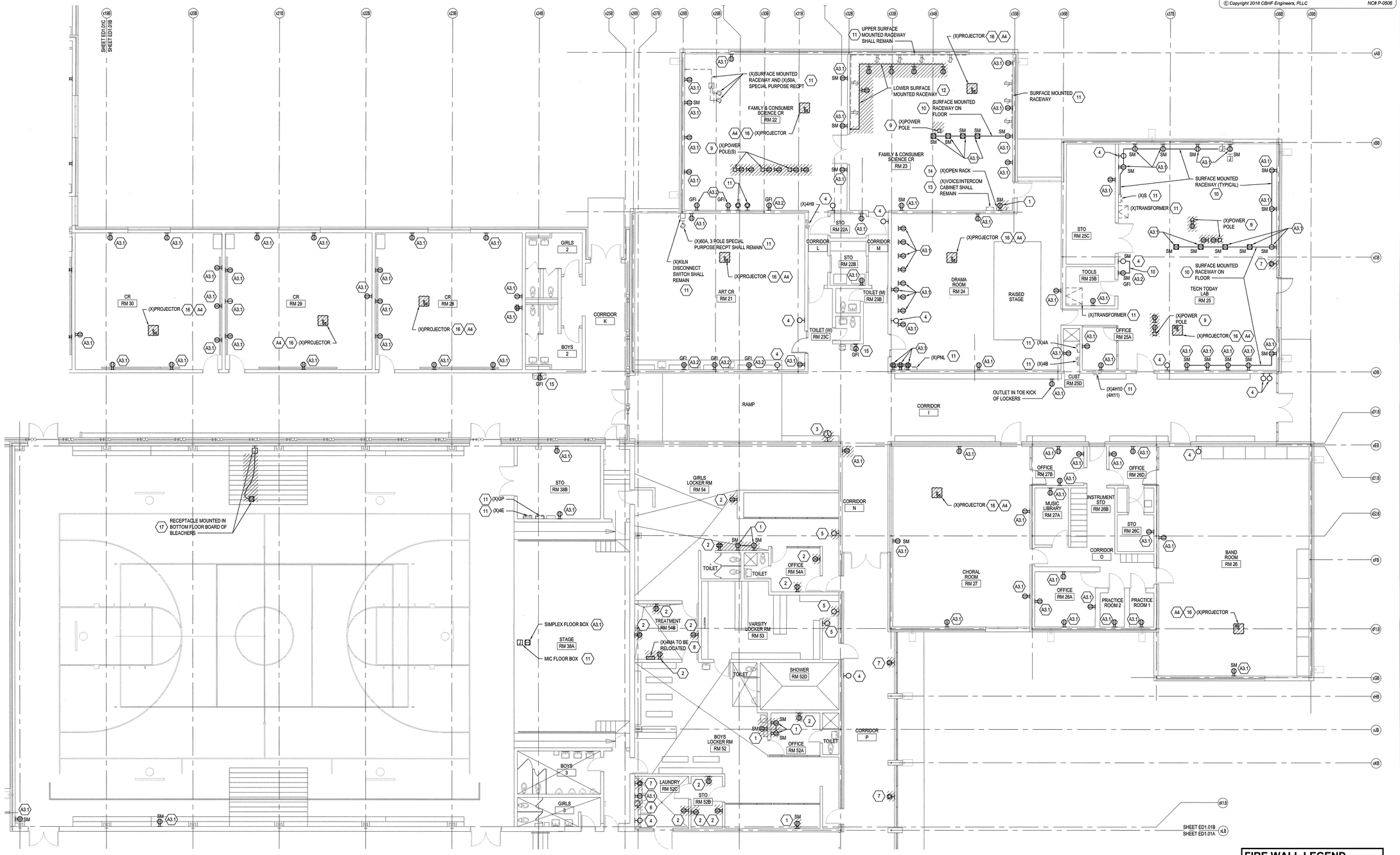
BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION POWER FLOOR PLAN - AREA B



KEYED NOTES THIS SHEET ONLY

1. SURFACE DUPLEX RECEPTACLE: REMOVE RECEPTACLE AND BOX, REMOVE SURFACE RACEWAY AND CONDUCTORS TO SOURCE AND LABEL BREAKER AS SPARE. IF OTHER LOADS ARE FED FROM THIS CIRCUIT REMOVE TO NEAREST POINT OF USE AND PROTECT REMAINING CIRCUIT. REMAINING CIRCUIT SHALL BE COMPLETELY OPERATIONAL AFTER DEMOLITION.
2. DUPLEX RECEPTACLE: REMOVE RECEPTACLE AND BOX, REMOVE CONDUIT AND CONDUCTORS TO SOURCE AND LABEL BREAKER AS SPARE. IF OTHER LOADS ARE FED FROM THIS CIRCUIT REMOVE TO NEAREST POINT OF USE AND PROTECT REMAINING CIRCUIT. REMAINING CIRCUIT SHALL BE COMPLETELY OPERATIONAL AFTER DEMOLITION.
3. CLOCK SYSTEM: REMOVE CLOCK SYSTEM PANEL, ALL CONDUIT AND CABLES. REMOVE ALL CEILING AND WALL MOUNTED CLOCKS THROUGHOUT THE SCHOOL AS INDICATED ON PLANS.
4. BLANK COVERPLATE: REMOVE COVER AND PROVIDE AND INSTALL BRUSHED STAINLESS BLANK COVER.
5. BLANK COVERPLATE: REMOVE BOX AND CONDUIT TO SOURCE.
6. DISCONNECT SWITCH: REMOVE DISCONNECT SWITCH, CONDUIT AND CONDUCTORS COMPLETE TO SOURCE.
7. SPECIAL PURPOSE RECEPTACLE: REMOVE RECEPTACLE AND CONDUCTORS TO COMPLETE TO SOURCE, PROVIDE BRUSHED STAINLESS BLANK COVER.
8. SURFACE PANELBOARD: REMOVE AND PROTECT PANEL FOR RELOCATION. LABEL ALL BRANCH CIRCUITS PRIOR TO DISCONNECTION FROM PANEL AND PROTECT IN PLACE UNLESS LOAD IS SPECIFICALLY NOTED ON PLAN TO BE REMOVED. PANELBOARD FEEDERS AND BRANCH CIRCUITS SHALL BE EXTENDED TO NEW PANEL LOCATION, SEE DRAWING E1.01A FOR NEW LOCATION.
9. POWER POLE: REMOVE CONDUCTORS TO ABOVE CEILING AND PROTECT FOR REUSE. REMOVE POWER POLE AND BOXES.
10. SURFACE RACEWAY: RACEWAY SHALL REMAIN PROTECTED IN PLACE.
11. EQUIPMENT: PROTECT IN PLACE, EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
12. SURFACE RACEWAY: REMOVE RACEWAY, BOXES AND CONDUCTORS COMPLETE TO SOURCE.
13. VOICE/INTERCOM CABINET: REMOVE COPPER VOICE CABLES ONLY COMPLETE FROM DEVICE TO SOURCE. SURFACE BOX AND INTERCOM SHALL REMAIN OPERATIONAL AND BE PROTECTED DURING DEMOLITION AND CONSTRUCTION. INTERCOM SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION IS COMPLETE.
14. OPEN RACK: REMOVE SURFACE MOUNTED RACK.
15. EWC: REMOVE FACE PLATE AND RECEPTACLE, REMOVE CONDUCTORS COMPLETE TO SOURCE, PROTECT BOX AND CONDUIT FOR RECONNECTION. REMOVE EXISTING BREAKER FEEDING EWC AND REPLACE WITH GFI BREAKER.
16. PROJECTOR: PROJECTOR SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT RECEPTACLE CIRCUIT, CONDUIT AND CONDUCTORS FOR RELOCATION.
17. BLEACHER POWER: REMOVE RECEPTACLE, BOX AND CONDUIT COMPLETE TO JUNCTION BOX ON WALL. PROTECT JUNCTION BOX AND CIRCUIT AT WALL FOR FUTURE USE.

ALTERNATE KEYED NOTES

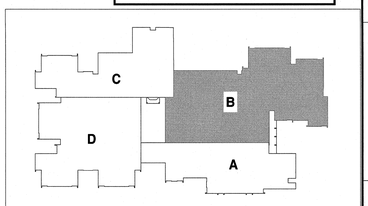
- A3.1 DUPLEX RECEPTACLE: REMOVE FACE PLATE AND RECEPTACLE, PROTECT BOX, CONDUIT AND CONDUCTORS FOR RECONNECTION.
- A3.2 GFI DUPLEX RECEPTACLE: REMOVE FACE PLATE AND RECEPTACLE, PROTECT BOX, CONDUIT AND CONDUCTORS FOR RECONNECTION.
- A4 PROJECTOR: PROJECTOR SHALL BE REMOVED BY A QUALIFIED VENDOR AND TURNED OVER TO OWNER. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT RECEPTACLE, RECEPTACLE CIRCUIT, CONDUIT AND CONDUCTORS TO BE REINSTALLED IN CEILING. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER.

NOTE

1. ELECTRICAL CONTRACTOR SHALL SECURE ALL CABLES, CONDUIT AND BOXES LOCATED ABOVE CEILING IN PLACE THAT ARE TO REMAIN OR TO BE REUSED AND FASTENED PER NEC.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED SURFACE MOUNTED RACEWAY ON WALLS AND FLOORS.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED1.01B **Demolition Power Floor Plan - Area B**
scale: 1/8" = 1'-0"

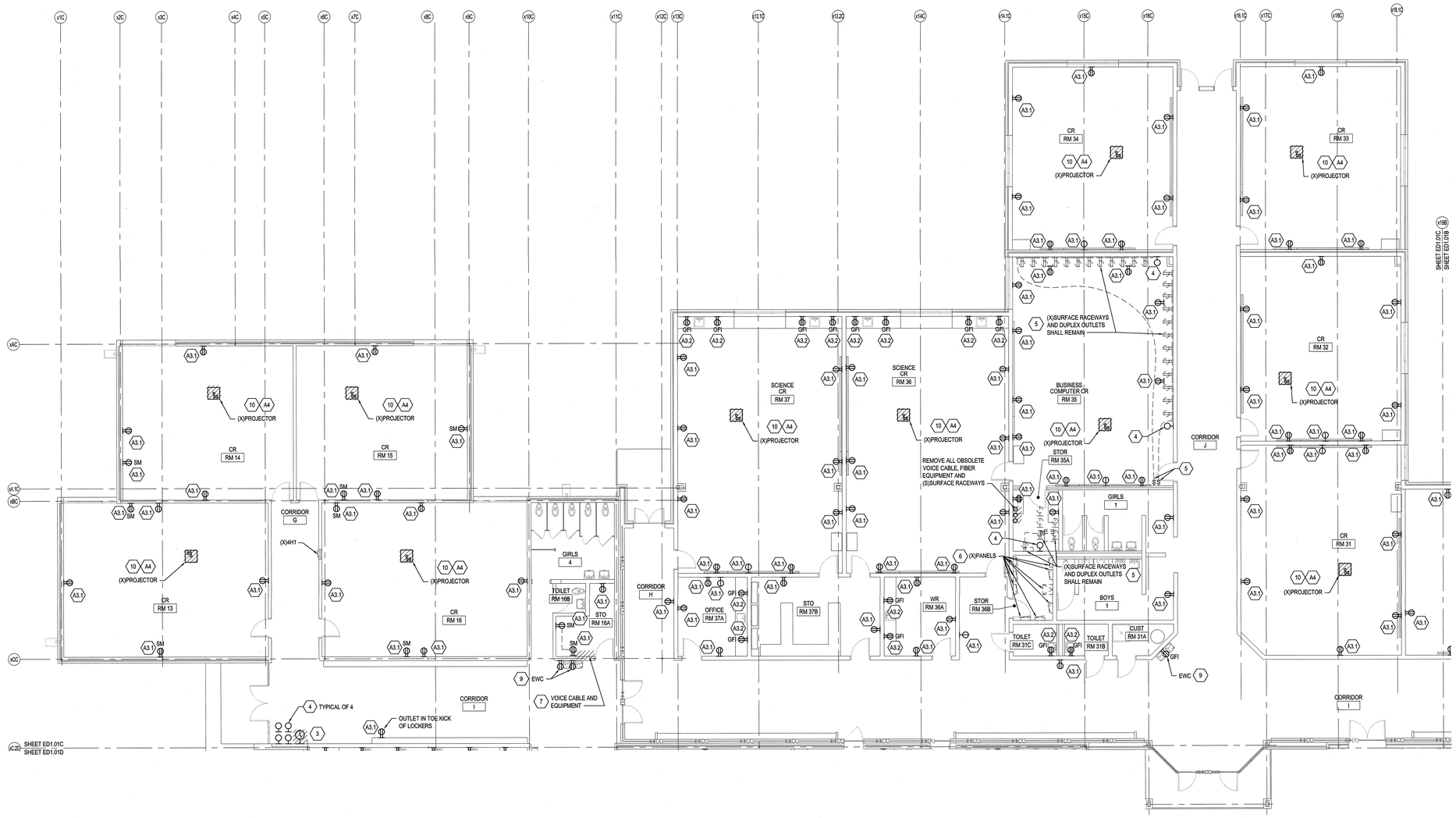
0' 4' 8' 16' 1/8" = 1'-0"

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED1.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



KEYED NOTES THIS SHEET ONLY

1. SURFACE DUPLEX RECEPTACLE: NOT USED.
2. DUPLEX RECEPTACLE: NOT USED.
3. CLOCK SYSTEM: REMOVE CLOCK SYSTEM PANEL, ALL CONDUIT AND CABLES. REMOVE ALL CEILING AND WALL MOUNTED CLOCKS THROUGHOUT THE SCHOOL AS INDICATED ON PLANS.
4. BLANK COVERPLATE: REMOVE COVER AND PROVIDE AND INSTALL BRUSHED STAINLESS BLANK COVER.
5. SURFACE RACEWAY: RACEWAY AND OUTLETS SHALL REMAIN PROTECTED IN PLACE, WALL SWITCHES CONTROLLING THE RACEWAY SHALL REMAIN.
6. EQUIPMENT: PROTECT IN PLACE, EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
7. CABLES AND EQUIPMENT: REMOVE ALL OBSOLETE VOICE CABLE , EQUIPMENT AND PLYWOOD BACKBOARD
8. FLUSH MOUNTED FLOOR BOX: NOT USED.
9. EWC: REMOVE FACE PLATE AND RECEPTACLE, REMOVE CONDUCTORS COMPLETE TO SOURCE, PROTECT BOX AND CONDUIT FOR RECONNECTION. REMOVE EXISTING BREAKER FEEDING EWC AND REPLACE WITH GFI BREAKER.
10. PROJECTOR: PROJECTOR SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT RECEPTACLE CIRCUIT, CONDUIT AND CONDUCTORS FOR RELOCATION.

ALTERNATE KEYED NOTES

A3.1 DUPLEX RECEPTACLE: REMOVE FACE PLATE AND RECEPTACLE, PROTECT BOX, CONDUIT AND CONDUCTORS FOR RECONNECTION.

A3.2 GFI DUPLEX RECEPTACLE: REMOVE FACE PLATE AND RECEPTACLE, PROTECT BOX, CONDUIT AND CONDUCTORS FOR RECONNECTION.

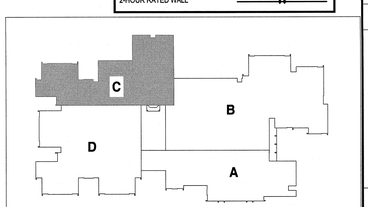
A4 PROJECTOR: PROJECTOR SHALL BE REMOVED BY A QUALIFIED VENDOR AND TURNED OVER TO OWNER. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT RECEPTACLE, RECEPTACLE CIRCUIT, CONDUIT AND CONDUCTORS TO BE REINSTALLED IN CEILING. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER.

NOTE

1. ELECTRICAL CONTRACTOR SHALL SECURE ALL CABLES, CONDUIT AND BOXES LOCATED ABOVE CEILING IN PLACE THAT ARE TO REMAIN OR TO BE REUSED AND FASTENED PER NEC.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED SURFACE MOUNTED RACEWAY ON WALLS AND FLOORS.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / ED1.01C **Demolition Power Floor Plan - Area C**
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"

SEAL 023311 ENGINEER W. ALLEN CRIBB
2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

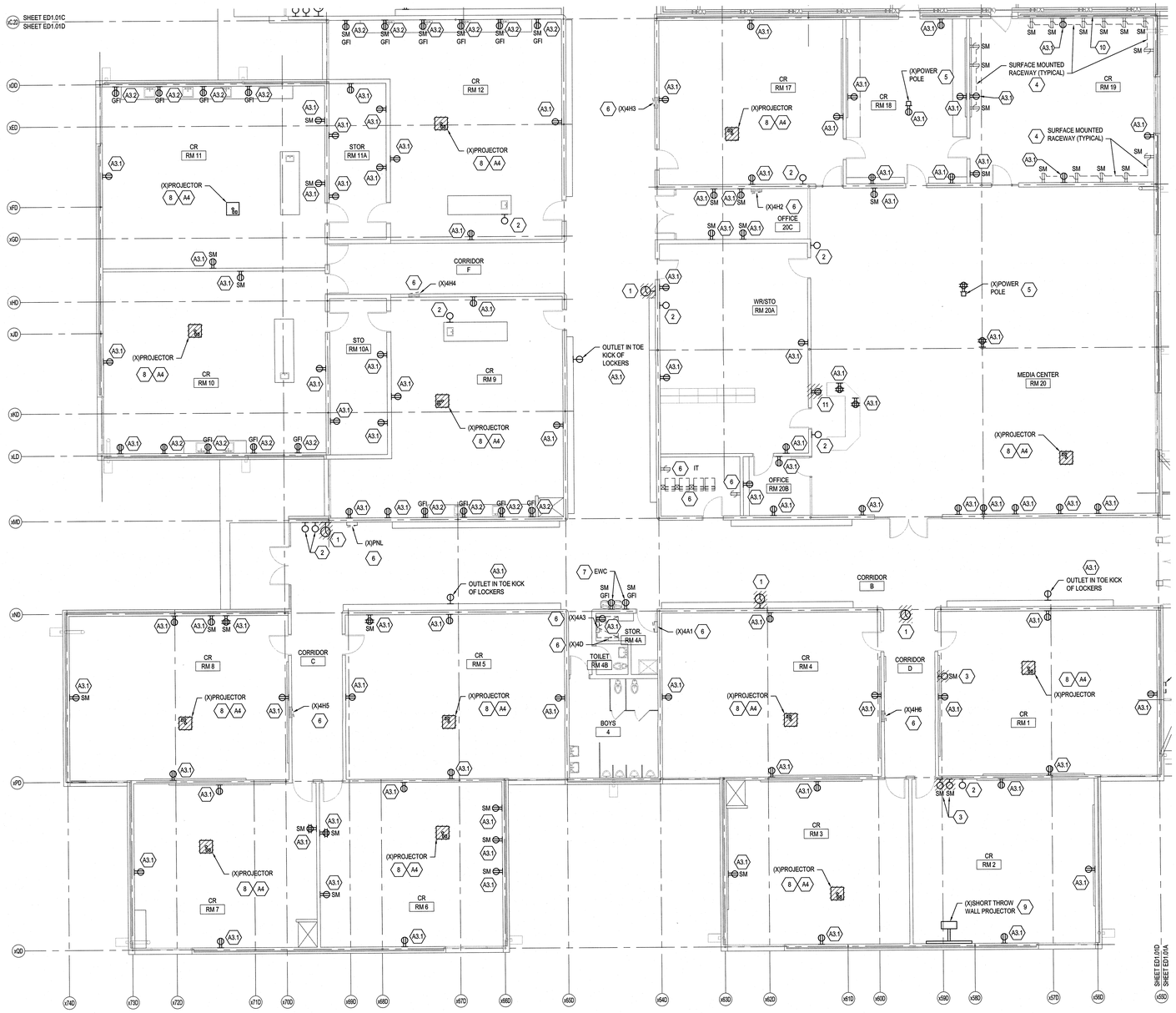
DEMOLITION POWER FLOOR PLAN - AREA C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED1.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



KEYED NOTES THIS SHEET ONLY

1. CLOCK SYSTEM: REMOVE CLOCK SYSTEM PANEL, ALL CONDUIT AND CABLES. REMOVE ALL CEILING AND WALL MOUNTED CLOCKS THROUGHOUT THE SCHOOL AS INDICATED ON PLANS.
2. BLANK COVERPLATE: REMOVE COVER AND PROVIDE AND INSTALL BRUSHED STAINLESS BLANK COVER.
3. SURFACE MOUNTED BOX AND BLANK COVERPLATE: REMOVE BOX, COVERPLATE AND CONDUIT TO SOURCE.
4. SURFACE RACEWAY: RACEWAY AND OUTLETS SHALL REMAIN PROTECTED IN PLACE.
5. POWER POLE: REMOVE CONDUCTORS TO ABOVE CEILING AND PROTECT FOR REUSE. REMOVE POWER POLE AND BOXES.
6. EQUIPMENT: PROTECT IN PLACE, EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
7. EWC: REMOVE FACE PLATE AND RECEPTACLE, REMOVE CONDUCTORS COMPLETE TO SOURCE, PROTECT BOX AND CONDUIT FOR RECONNECTION. REMOVE EXISTING BREAKER FEEDING EWC AND REPLACE WITH GFI BREAKER.
8. PROJECTOR: COORDINATE WITH NEW HANOVER COUNTY SCHOOLS FOR REMOVAL OF PROJECTOR. REMOVE PROJECTOR PAN AND DUPLEX RECEPTACLE, PROTECT CONDUIT AND CONDUCTORS FOR RECONNECTION.
9. SHORT THROW WALL PROJECTOR: COORDINATE WITH NEW HANOVER COUNTY SCHOOLS FOR REMOVAL OF PROJECTOR. REMOVE PROJECTOR AND ALL ASSOCIATED CABLES AND DELIVER TO OWNER.
10. RECORDEX: COORDINATE WITH NEW HANOVER COUNTY SCHOOLS FOR REMOVAL OF RECORDX BY QUALIFIED VENDOR AND DELIVER TO OWNER. PROTECT ALL CABLES AND ASSOCIATED SURFACE RACEWAY FOR REINSTALLATION.
11. DUPLEX RECEPTACLE: REMOVE RECEPTACLE AND BOX, PROTECT CONDUIT AND CONDUCTORS FOR RECONNECTION. REWORK WALL TO ACCEPT 2 GANG FLUSH MOUNTED BOX.

ALTERNATE KEYED NOTES

A3.1 DUPLEX RECEPTACLE: REMOVE FACE PLATE AND RECEPTACLE, PROTECT BOX, CONDUIT AND CONDUCTORS FOR RECONNECTION.

A3.2 GFI DUPLEX RECEPTACLE: REMOVE FACE PLATE AND RECEPTACLE, PROTECT BOX, CONDUIT AND CONDUCTORS FOR RECONNECTION.

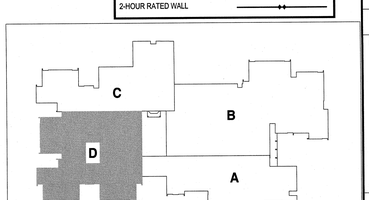
A4 PROJECTOR: PROJECTOR SHALL BE REMOVED BY A QUALIFIED VENDOR AND TURNED OVER TO OWNER. PROJECTOR MOUNT SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT RECEPTACLE, RECEPTACLE CIRCUIT, CONDUIT AND CONDUCTORS TO BE REINSTALLED IN CEILING. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER.

NOTE

1. ELECTRICAL CONTRACTOR SHALL SECURE ALL CABLES, CONDUIT AND BOXES LOCATED ABOVE CEILING IN PLACE THAT ARE TO REMAIN OR TO BE REUSED AND FASTENED PER NEC.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED SURFACE MOUNTED RACEWAY ON WALLS AND FLOORS.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / ED1.01D **Demolition Power Floor Plan - Area D**
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"



2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION POWER
FLOOR PLAN - AREA D

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

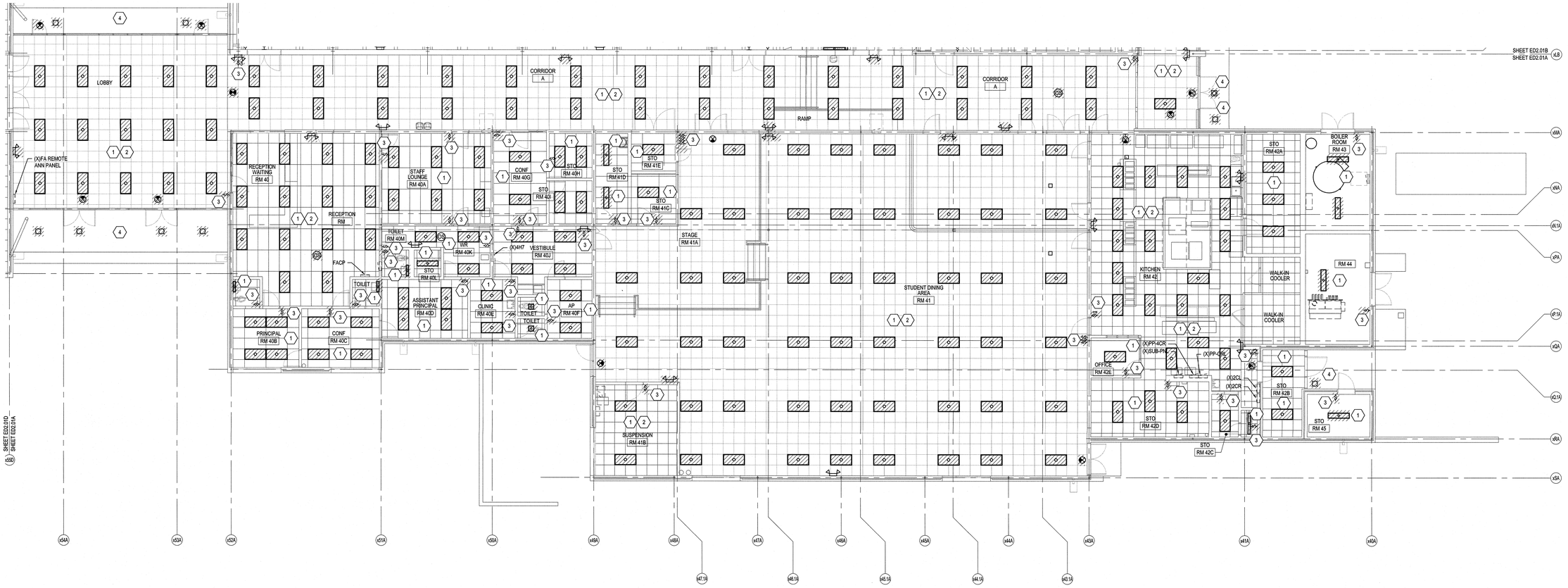
SHEET NUMBER
ED1.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER WILLIAM ALLEN CBHF

2–4–19

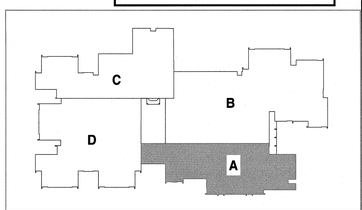


KEYED NOTES

1. ALL EXISTING FLUORESCENT LAY-IN LIGHTING FIXTURES, EXIT AND 2-HEAD EMERGENCY FIXTURES WILL BE REPLACED WITH LED FIXTURES AS INDICATED IN LIGHTING FIXTURE SCHEDULE. ALL FLUORESCENT, HID AND INCANDESCENT SURFACE MOUNTED, LAY-IN, RECESSED, SUSPENDED AND SPECIALTY FIXTURES WILL BE REPLACED WITH LED FIXTURES. PROTECT LIGHTING CIRCUITS IN PLACE FOR REUSE.
2. OCC SENSOR(S): REMOVE SENSOR AND ALL ASSOCIATED CONDUIT AND CONDUCTORS.
3. SWITCH: REMOVE SWITCH AND CONDUCTORS COMPLETE TO FIXTURE. CONDUIT DOWN WALL AND FLUSH MOUNTED SWITCH BOX SHALL REMAIN FOR LOW VOLTAGE FIXTURE CONTROL CABLE.
4. EXTERIOR EGRESS LIGHT: REMOVE SURFACE MOUNTED, RECESSED FIXTURES, CONDUIT AND CONDUCTORS SHALL BE PROTECTED IN PLACE FOR EXTERIOR EGRESS LIGHT.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED2.01A **Demolition Lighting Floor Plan - Area A**
scale: 1/8" = 1'-0"

0 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION LIGHTING FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

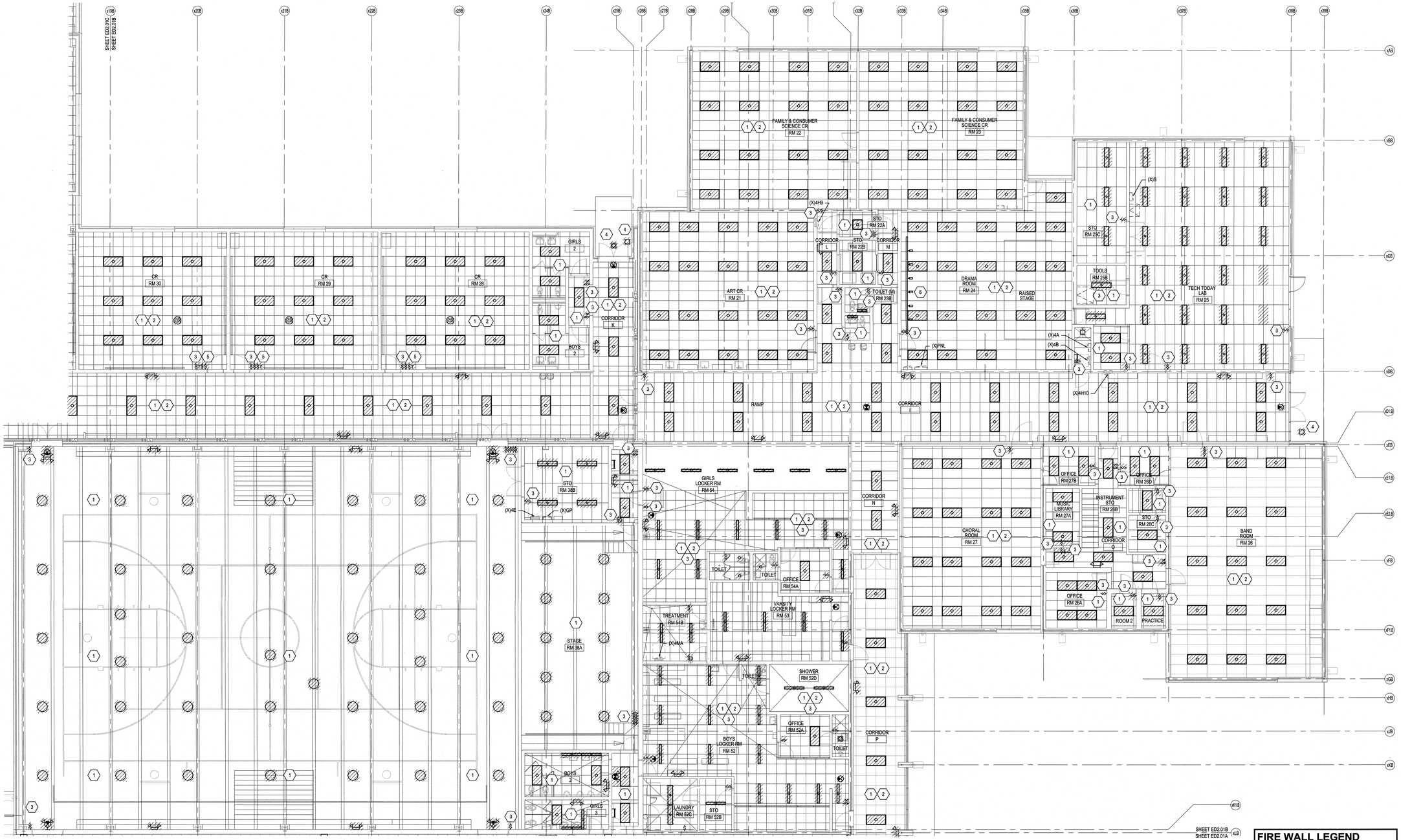
SHEET NUMBER ED2.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-6506

SEAL 023311 ENGINEER W. ALLEN CBHF

2–4–19

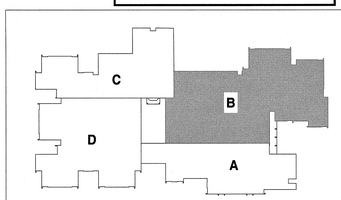


KEYED NOTES

1. ALL EXISTING FLUORESCENT LAY-IN LIGHTING FIXTURES, EXIT AND 2-HEAD EMERGENCY FIXTURES WILL BE REPLACED WITH LED FIXTURES AS INDICATED IN LIGHTING FIXTURE SCHEDULE. ALL FLUORESCENT, HID AND INCANDESCENT SURFACE MOUNTED, LAY-IN, RECESSED, SUSPENDED AND SPECIALTY FIXTURES WILL BE REPLACED WITH LED FIXTURES. PROTECT LIGHTING CIRCUITS IN PLACE FOR REUSE.
2. OCC SENSOR(S): REMOVE SENSOR AND ALL ASSOCIATED CONDUIT AND CONDUCTORS.
3. SWITCH: REMOVE SWITCH AND CONDUCTORS COMPLETE TO FIXTURE. CONDUIT DOWN WALL AND FLUSH MOUNTED SWITCH BOX SHALL REMAIN FOR LOW VOLTAGE FIXTURE CONTROL CABLE.
4. EXTERIOR EGRESS LIGHT: REMOVE SURFACE MOUNTED, RECESSED FIXTURES, CONDUIT AND CONDUCTORS SHALL BE PROTECTED IN PLACE FOR EXTERIOR EGRESS LIGHT.
5. CALL BUTTON TOGGLE SWITCH: REMOVE SWITCH AND CABLE COMPLETE TO SOURCE, PROVIDE BLANK STAINLESS STEEL COVERPLATE.
6. STAGE LIGHTING: PROTECT IN PLACE DURING DEMOLITION AND CONSTRUCTION.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED2.01B **Demolition Lighting Floor Plan - Area B**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

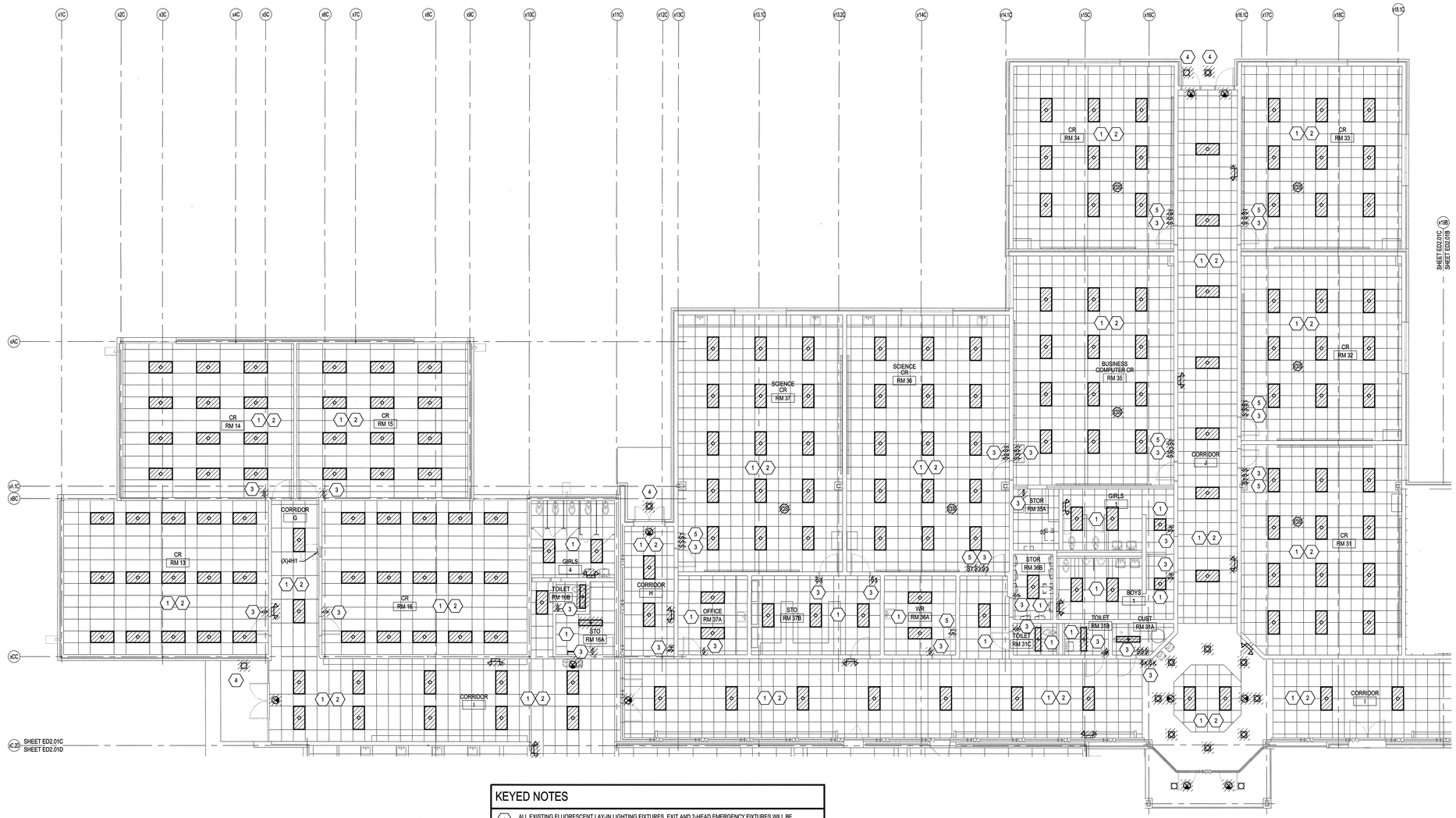
DEMOLITION LIGHTING FLOOR PLAN - AREA B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED2.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

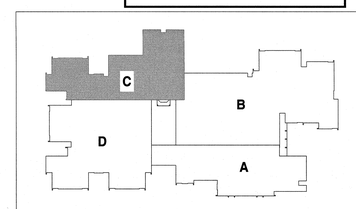


KEYED NOTES

1. ALL EXISTING FLUORESCENT LAY-IN LIGHTING FIXTURES, EXIT AND 2-HEAD EMERGENCY FIXTURES WILL BE REPLACED WITH LED FIXTURES AS INDICATED IN LIGHTING FIXTURE SCHEDULE. ALL FLUORESCENT, HID AND INCANDESCENT SURFACE MOUNTED, LAY-IN, RECESSED, SUSPENDED AND SPECIALTY FIXTURES WILL BE REPLACED WITH LED FIXTURES. PROTECT LIGHTING CIRCUITS IN PLACE FOR REUSE.
2. OCC SENSOR(S): REMOVE SENSOR AND ALL ASSOCIATED CONDUIT AND CONDUCTORS.
3. SWITCH: REMOVE SWITCH AND CONDUCTORS COMPLETE TO FIXTURE. CONDUIT DOWN WALL AND FLUSH MOUNTED SWITCH BOX SHALL REMAIN FOR LOW VOLTAGE FIXTURE CONTROL CABLE.
4. EXTERIOR EGRESS LIGHT: REMOVE SURFACE MOUNTED, RECESSED FIXTURES, CONDUIT AND CONDUCTORS SHALL BE PROTECTED IN PLACE FOR EXTERIOR EGRESS LIGHT.
5. CALL BUTTON TOGGLE SWITCH: REMOVE SWITCH AND CABLE COMPLETE TO SOURCE, PROVIDE BLANK STAINLESS STEEL COVERPLATE.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED2.01C **Demolition Lighting Floor Plan - Area C**
scale: 1/8" = 1'-0"

0' 4' 8' 16' 1/8" = 1'-0"

Renovations to:
M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION LIGHTING FLOOR PLAN - AREA C

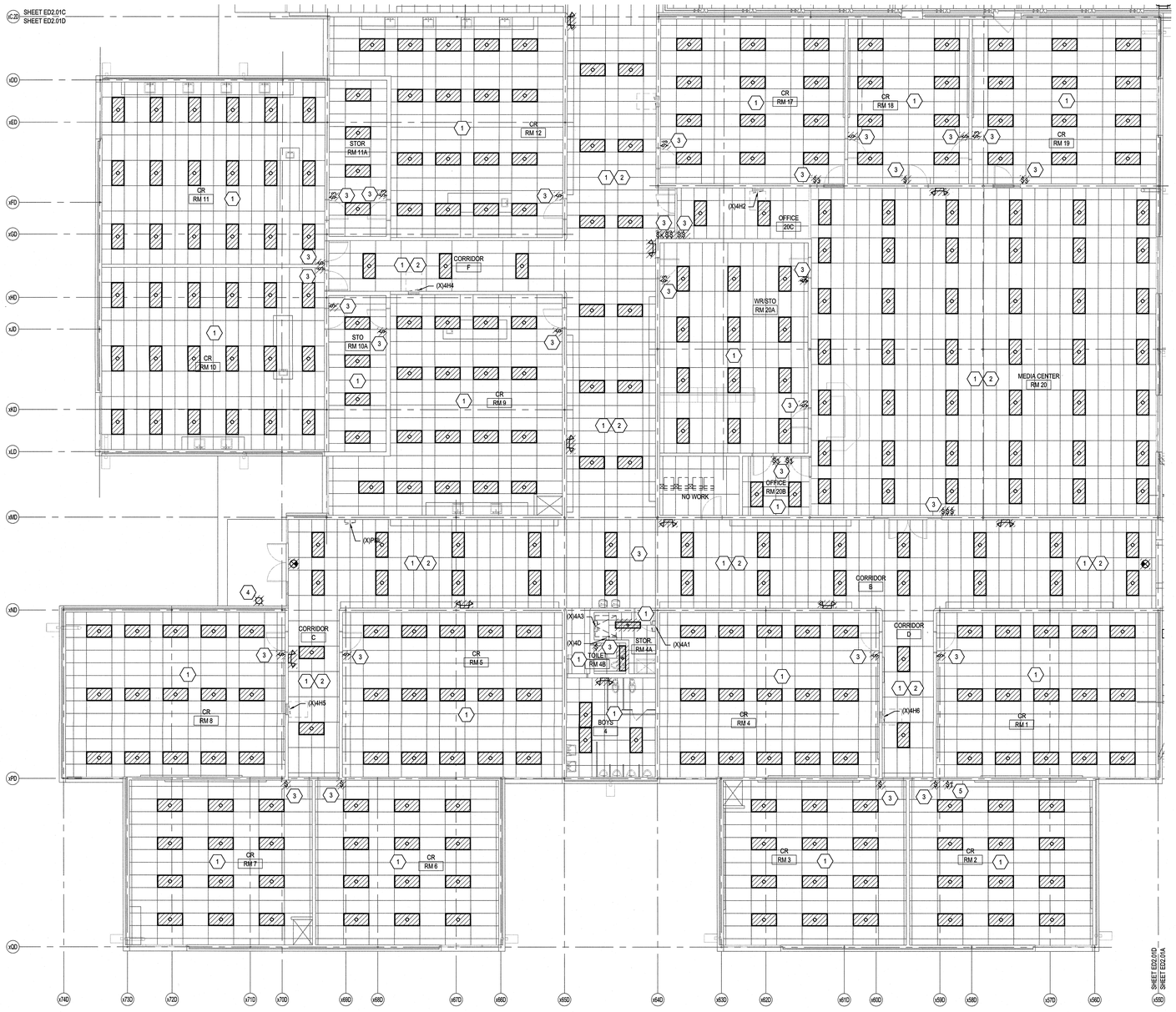
JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER
ED2.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-6506

SEAL 023311 ENGINEER W. ALLEN CBHF
2-4-19

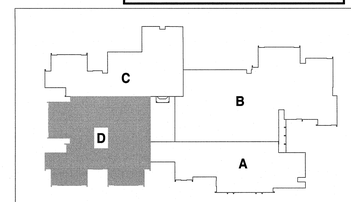


KEYED NOTES

1. ALL EXISTING FLUORESCENT LAY-IN LIGHTING FIXTURES, EXIT AND 2-HEAD EMERGENCY FIXTURES WILL BE REPLACED WITH LED FIXTURES AS INDICATED IN LIGHTING FIXTURE SCHEDULE. ALL FLUORESCENT, HID AND INCANDESCENT SURFACE MOUNTED, LAY-IN, RECESSED, SUSPENDED AND SPECIALTY FIXTURES WILL BE REPLACED WITH LED FIXTURES. PROTECT LIGHTING CIRCUITS IN PLACE FOR REUSE.
2. OCC SENSOR(S): REMOVE SENSOR AND ALL ASSOCIATED CONDUIT AND CONDUCTORS.
3. SWITCH: REMOVE SWITCH AND CONDUCTORS COMPLETE TO FIXTURE. CONDUIT DOWN WALL AND FLUSH MOUNTED SWITCH BOX SHALL REMAIN FOR LOW VOLTAGE FIXTURE CONTROL CABLE.
4. EXTERIOR EGRESS LIGHT: REMOVE SURFACE MOUNTED, RECESSED FIXTURES, CONDUIT AND CONDUCTORS SHALL BE PROTECTED IN PLACE FOR EXTERIOR EGRESS LIGHT.
5. CALL BUTTON TOGGLE SWITCH: REMOVE SWITCH AND CABLE COMPLETE TO SOURCE, PROVIDE BLANK STAINLESS STEEL COVERPLATE.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED2.01D **Demolition Lighting Floor Plan - Area D**

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

0 4' 8' 16' 1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

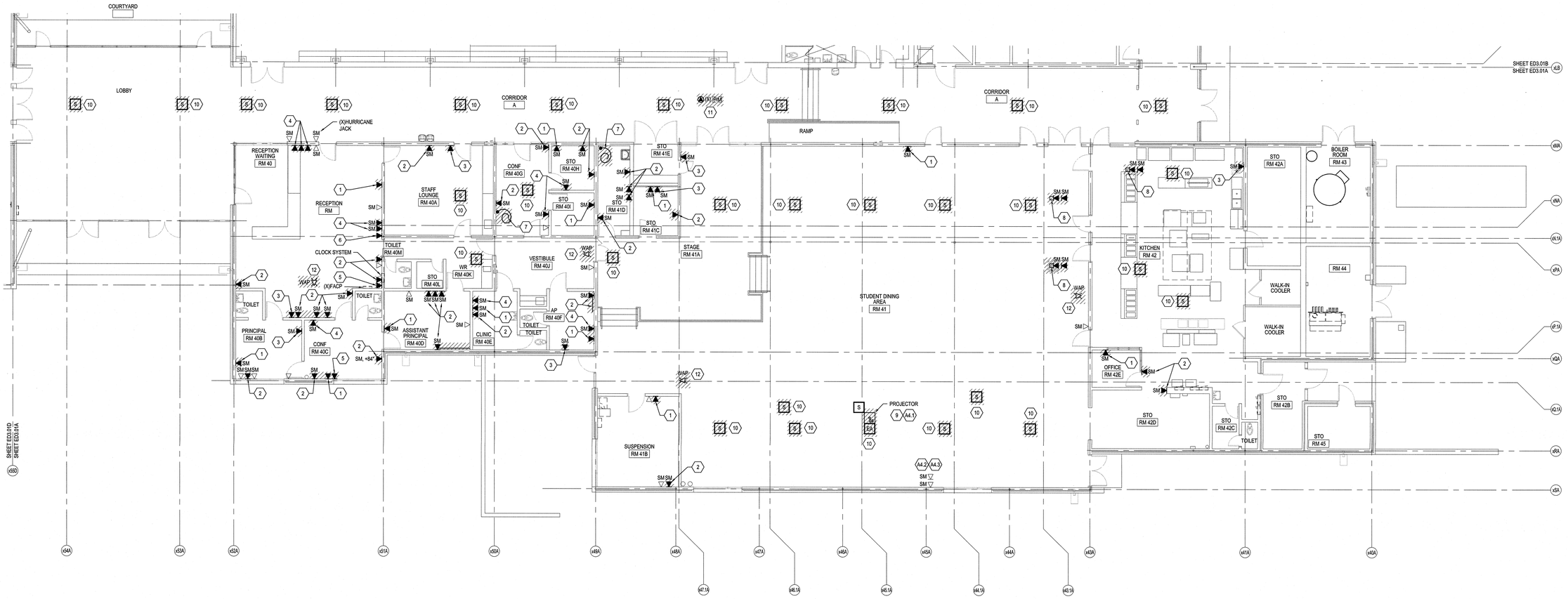
DEMOLITION LIGHTING FLOOR PLAN - AREA D

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED2.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



DEMOLITION KEYED NOTES

1. REMOVE VOICE CABLE COMPLETE TO SOURCE, REMOVE RJ45 CONNECTOR AND PROVIDE BLANK IN OPEN RJ45 SPACE. CONTRACTOR SHALL VERIFY EXISTING REMAINING CAT6 DATA CABLES ARE OPERATIONAL AFTER DEMOLITION.
2. REMOVE SURFACE RACEWAY AND BOX, REMOVE CABLE COMPLETE TO SOURCE.
3. REMOVE SURFACE RACEWAY.
4. REMOVE SURFACE RACEWAY AND BOX.
5. REMOVE SURFACE RACEWAY AND TOKEN RING CABLE.
6. REMOVE COVER AND PROVIDE BRUSHED STAINLESS BLANK COVER.
7. REMOVE CABLE HANGING FROM CEILING COMPLETE TO SOURCE.
8. REMOVE AND COIL DATA CABLES ABOVE CEILING AND PROTECT FOR RE-INSTALLATION, REMOVE POWER/DATA POLE.
9. PROJECTOR: PROJECTOR SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT ALL CABLES FROM WALL BOX TO PROJECTOR CEILING PAN FOR RELOCATION.
10. CEILING MOUNTED SPEAKERS: PRIOR TO DEMOLITION LABEL SPEAKER WITH CURRENT ROOM LOCATION, REMOVE SPEAKER AND PROTECT FOR REINSTALLATION. PROTECT CABLE AND CONDUIT IN PLACE FOR RECONNECTION.
11. CEILING MOUNTED PIM DEVICE: PRIOR TO DEMOLITION COORDINATE WITH NEW HANOVER COUNTY SCHOOLS SECURITY DEPT (JAMES DILLON). NEW HANOVER COUNTY SCHOOLS SECURITY DEPT. SHALL REMOVE AND STORE PIMS DEVICES AND EQUIPMENT DURING DEMOLITION AND CONSTRUCTION.
12. WAP: PRIOR TO DEMOLITION COORDINATE WITH NEW HANOVER COUNTY SCHOOLS IT DEPT (JAMOS BLACKBURN). NEW HANOVER COUNTY SCHOOLS SECURITY DEPT. SHALL REMOVE AND STORE WAP DEVICES AND EQUIPMENT DURING DEMOLITION AND CONSTRUCTION, PROTECT EXISTING DATA CABLE FOR REUSE.

ALTERNATE KEYED NOTES

A4.1 PROJECTOR SHALL BE REMOVED BY A QUALIFIED VENDOR AND TURNED OVER TO OWNER. PROJECTOR CEILING PAN PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. REMOVE ALL AV CABLES FROM PROJECTOR CEILING PAN TO WALL MOUNTED AV BOXES. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER IN PROJECTOR CEILING PAN.

A4.2 TEACHERS STATION: PROTECT SURFACE MOUNTED BOX, FACEPLATE AND ALL CABLES FROM TEACHERS STATION TO PROJECTOR PANEL DURING DEMOLITION AND CONSTRUCTION.

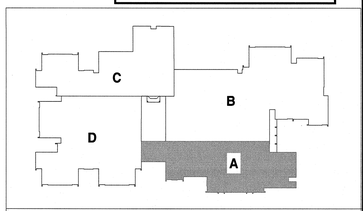
A4.3 EA SPEAKER: DISCONNECT AND REMOVE SPEAKER, SPEAKER CABLE SHALL REMAIN FROM SPEAKER TO SURFACE MOUNTED BOX AT TEACHERS STAITON.

NOTE

1. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / ED3.01A **Demolition Voice/Data Floor Plan - Area A**
scale: 1/8" = 1'-0"
0 4' 8' 16'
1/8" = 1'-0"

SEAL 023311 ENGINEER W. ALLEN CBHF

2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION VOICE/DATA FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED3.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

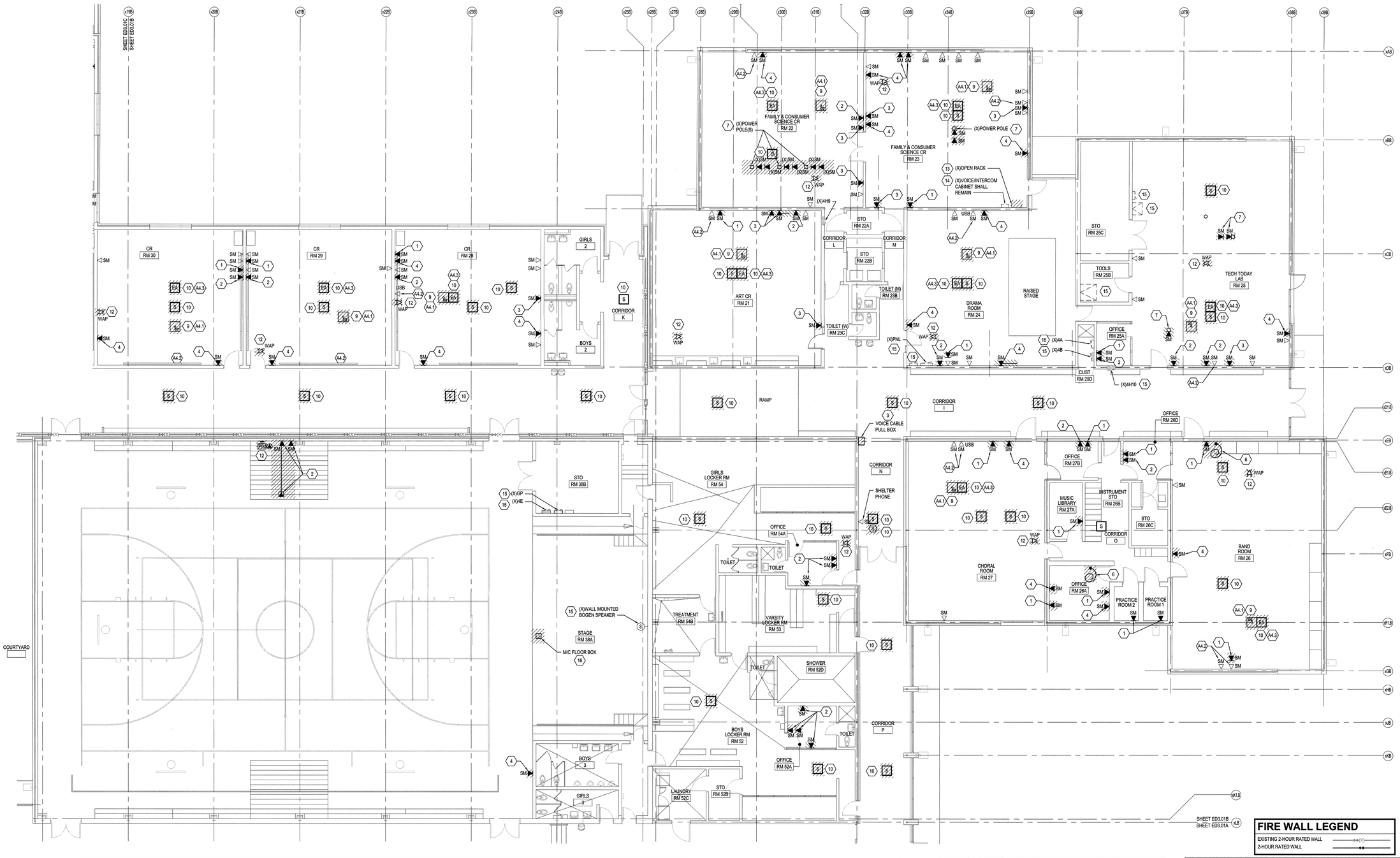
BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-6506

SEAL 023311 ENGINEER W. ALLEN CBHF

2–4–19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405



FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

DEMOLITION KEYED NOTES

1. REMOVE VOICE CABLE COMPLETE TO SOURCE, REMOVE RJ45 CONNECTOR AND PROVIDE BLANK IN OPEN RJ45 SPACE. CONTRACTOR SHALL VERIFY EXISTING REMAINING CAT6 DATA CABLES ARE OPERATIONAL AFTER DEMOLITION
2. REMOVE SURFACE RACEWAY AND BOX, REMOVE CABLE COMPLETE TO SOURCE.
3. REMOVE SURFACE RACEWAY.
4. REMOVE SURFACE RACEWAY AND BOX.
5. REMOVE SURFACE RACEWAY AND TOKEN RING CABLE.
6. REMOVE CABLE HANGING FROM CEILING COMPLETE TO SOURCE.
7. POWER POLE: REMOVE AND COIL DATA CABLES ABOVE CEILING AND PROTECT FOR RE-INSTALLATION, REMOVE POWER/DATA POLE.
8. REMOVE COVER AND PROVIDE BRUSHED STAINLESS BLANK COVER.
9. PROJECTOR: PROJECTOR SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT ALL CABLES FROM WALL BOX TO PROJECTOR CEILING PAN FOR RELOCATION.
10. CEILING MOUNTED SPEAKERS: PRIOR TO DEMOLITION LABEL SPEAKER WITH CURRENT ROOM LOCATION. REMOVE SPEAKER AND PROTECT FOR REINSTALLATION. PROTECT CABLE AND CONDUIT IN PLACE FOR RECONNECTION.
11. WALL MOUNTED PIM DEVICE: PRIOR TO DEMOLITION COORDINATE WITH NEW HANOVER COUNTY SCHOOLS SECURITY DEPT (JAMES DILLON). NEW HANOVER COUNTY SCHOOLS SECURITY DEPT. SHALL REMOVE AND STORE PIMS DEVICES AND EQUIPMENT DURING DEMOLITION AND CONSTRUCTION.
12. WAP: PRIOR TO DEMOLITION COORDINATE WITH NEW HANOVER COUNTY SCHOOLS IT DEPT (JAMOS BLACKBURN). NEW HANOVER COUNTY SCHOOLS SECURITY DEPT. SHALL REMOVE AND STORE WAP DEVICES AND EQUIPMENT DURING DEMOLITION AND CONSTRUCTION.
13. REMOVE ABANDONED WALL CABINET.
14. REMOVE VOICE CABLE ONLY, INTERCOM CABLE AND WALL MOUNTED CABINET SHALL REMAIN OPERATIONAL.
15. EQUIPMENT: PROTECT IN PLACE, EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
16. FLOOR MIC: REMOVE CONNECTOR AND CABLE COMPLETE TO SOURCE, PROVIDE BRASS BLANK COVER PLATE.

ALTERNATE KEYED NOTES

A4.1 PROJECTOR: PROJECTOR SHALL BE REMOVED BY A QUALIFIED VENDOR AND TURNED OVER TO OWNER. PROJECTOR CEILING PAN MOUNT SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. REMOVE ALL AV CABLES FROM PROJECTOR CEILING PAN TO WALL MOUNTED AV BOXES. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER IN PROJECTOR CEILING PAN.

A4.2 TEACHERS STATION: SMART BOARD SHALL BE REMOVED BY QUALIFIED VENDOR AND TURNED OVER TO OWNER. REMOVE ALL AV CABLING, AND CONNECTIONS IN EXISTING AV BOXES ASSOCIATED WITH TEACHERS STATION. PROVIDE BLANK FACEPLATE FOR REMAINING BOX. EXISTING DATA CABLES, DATA FACEPLATES AND RACEWAY SHALL REMAIN OPERATIONAL DURING DEMOLITION AND CONSTRUCTION.
NOTE: NOT ALL CONDITIONS AT TEACHERS STATION ARE TYPICAL. PRIOR TO DEMOLITION CONTRACTOR SHALL VERIFY EACH TEACHERS STATION LOCATION WITH N.H. Co. IT DEPARTMENT.

A4.3 EA SPEAKER: DISCONNECT AND REMOVE SPEAKER, REMOVE SPEAKER CABLE FROM SPEAKER TO SURFACE MOUNTED BOX AT TEACHERS STATION.

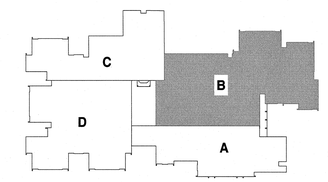
DEMOLITION NOTES

1. FINISHES IN AREAS AROUND DEVICES SHALL BE REPAIRED/REPLACED TO MATCH EXISTING AREAS (EX. NEW CEILING TILE WHERE DEVICE AND BOX IS REMOVED, ETC.).
2. PROTECT ALL EXISTING DATA AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ENGINEER IN WRITING IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

TRUE PLAN NORTH

1 ED3.01B **Demolition Voice/Data Floor Plan - Area B**
scale: 1/8" = 1'-0"

0' 4' 8' 16' 1/8" = 1'-0"



KEY PLAN

DEMOLITION VOICE/DATA
FLOOR PLAN - AREA B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

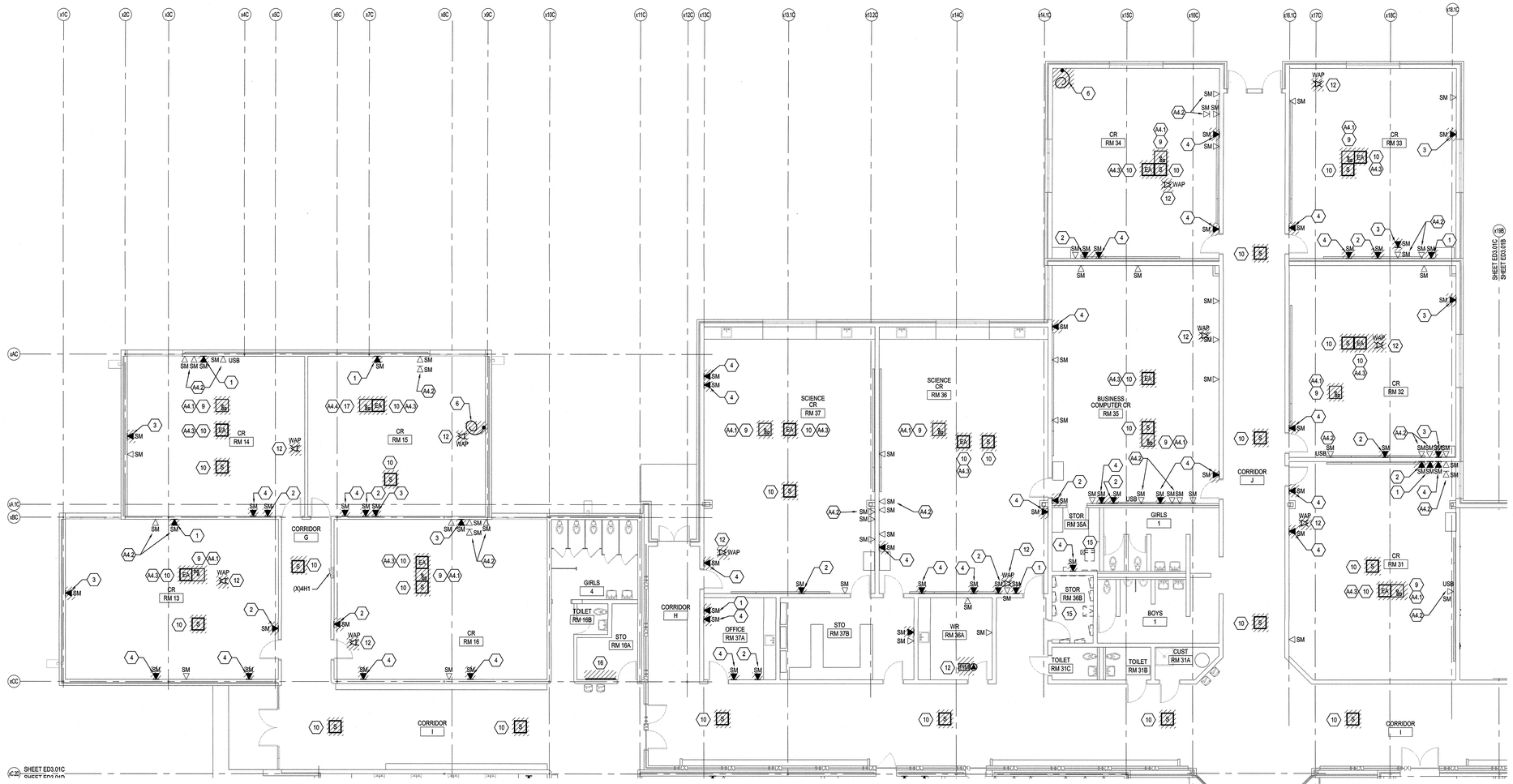
SHEET NUMBER
ED3.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-6506

SEAL 023311 ENGINEER W. ALLEN CBHF

2–4–19



DEMOLITION KEYED NOTES

1. REMOVE VOICE CABLE COMPLETE TO SOURCE, REMOVE RJ45 CONNECTOR AND PROVIDE BLANK IN OPEN RJ45 SPACE. CONTRACTOR SHALL VERIFY EXISTING REMAINING CAT6 DATA CABLES ARE OPERATIONAL AFTER DEMOLITION
2. REMOVE SURFACE RACEWAY AND BOX, REMOVE CABLE COMPLETE TO SOURCE.
3. REMOVE SURFACE RACEWAY.
4. REMOVE SURFACE RACEWAY AND BOX.
5. REMOVE SURFACE RACEWAY AND TOKEN RING CABLE.
6. REMOVE CABLE HANGING FROM CEILING COMPLETE TO SOURCE.
7. POWER POLE: REMOVE AND COIL DATA CABLES ABOVE CEILING AND PROTECT FOR RE-INSTALLATION, REMOVE POWER/DATA POLE.
8. REMOVE COVER AND PROVIDE BRUSHED STAINLESS BLANK COVER.
9. PROJECTOR: PROJECTOR SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT ALL CABLES FROM WALL BOX TO CEILING PAN FOR RELOCATION.
10. CEILING MOUNTED SPEAKERS: PRIOR TO DEMOLITION LABEL SPEAKER WITH CURRENT ROOM LOCATION. REMOVE SPEAKER AND PROTECT FOR REINSTALLATION. PROTECT CABLE AND CONDUIT IN PLACE FOR RECONNECTION.
12. WALL MOUNTED PIM DEVICE: PRIOR TO DEMOLITION COORDINATE WITH NEW HANOVER COUNTY SCHOOLS SECURITY DEPT (JAMES DILLON). NEW HANOVER COUNTY SCHOOLS SECURITY DEPT. SHALL REMOVE AND STORE PIMS DEVICES AND EQUIPMENT DURING DEMOLITION AND CONSTRUCTION.
12. WAP: PRIOR TO DEMOLITION COORDINATE WITH NEW HANOVER COUNTY SCHOOLS IT DEPT (JAMOS BLACKBURN). NEW HANOVER COUNTY SCHOOLS SECURITY DEPT. SHALL REMOVE AND STORE WAP DEVICES AND EQUIPMENT DURING DEMOLITION AND CONSTRUCTION.
13. REMOVE ABANDONED WALL CABINET.
14. REMOVE VOICE CABLE ONLY, INTERCOM CABLE AND WALL MOUNTED CABINET SHALL REMAIN OPERATIONAL.
15. EQUIPMENT: PROTECT IN PLACE, EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
16. TELECOM: REMOVE PLYWOOD BACKBOARD AND PUNCH DOWN BLOCK.
17. PROJECTOR: PROJECTOR IN CR 15 SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR AND BE REINSTALLED IN STUDENT DINING RM 41. PROJECTOR CEILING MOUNT SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT ALL CABLES FROM WALL BOX TO CEILING PAN FOR RELOCATION. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER IN PROJECTOR CEILING PAN.

ALTERNATE KEYED NOTES

A4.1 PROJECTOR: PROJECTOR SHALL BE REMOVED BY A QUALIFIED VENDOR AND TURNED OVER TO OWNER. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. REMOVE ALL AV CABLES FROM PROJECTOR CEILING PAN TO WALL MOUNTED AV BOXES. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER IN PROJECTOR CEILING PAN.

A4.2 TEACHERS STATION: SMART BOARD SHALL BE REMOVED BY QUALIFIED VENDOR AND TURNED OVER TO OWNER. REMOVE ALL AV CABLING, AND CONNECTIONS IN EXISTING AV BOXES ASSOCIATED WITH TEACHERS STATION. PROVIDE BLANK FACEPLATE FOR REMAINING BOX. EXISTING DATA CABLES, DATA FACEPLATES AND RACEWAY SHALL REMAIN OPERATIONAL DURING DEMOLITION AND CONSTRUCTION.
NOTE: NOT ALL CONDITIONS AT TEACHERS STATION ARE TYPICAL. PRIOR TO DEMOLITION CONTRACTOR SHALL VERIFY EACH TEACHERS STATION LOCATION WITH N.H. Co. IT DEPARTMENT.

A4.3 EA SPEAKER: DISCONNECT AND REMOVE SPEAKER, REMOVE SPEAKER CABLE FROM SPEAKER TO SURFACE MOUNTED BOX AT TEACHERS STATION.

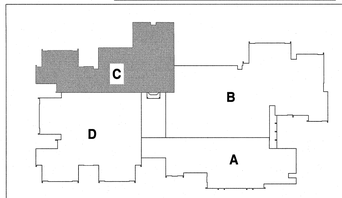
A4.4 PROJECTOR: PROJECTOR IN CR 15 SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR AND BE REINSTALLED IN STUDENT DINING RM 41. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. REMOVE ALL AV CABLES FROM PROJECTOR CEILING PAN TO WALL MOUNTED AV BOXES. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER IN PROJECTOR CEILING PAN.

DEMOLITION NOTES

1. FINISHES IN AREAS AROUND DEVICES SHALL BE REPAIRED/REPLACED TO MATCH EXISTING AREAS (EX. NEW CEILING TILE WHERE DEVICE AND BOX IS REMOVED, ETC.).
2. PROTECT ALL EXISTING DATA AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ENGINEER IN WRITING IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED3.01C **Demolition Voice/Data Floor Plan - Area C**
scale: 1/8" = 1'-0"

0' 4' 8' 16' 1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION VOICE/DATA FLOOR PLAN - AREA C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED3.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF
2-4-19

DEMOLITION KEYED NOTES

1. REMOVE VOICE CABLE COMPLETE TO SOURCE, REMOVE RJ45 CONNECTOR AND PROVIDE BLANK IN OPEN RJ45 SPACE. CONTRACTOR SHALL VERIFY EXISTING REMAINING CAT6 DATA CABLES ARE OPERATIONAL AFTER DEMOLITION
2. REMOVE SURFACE RACEWAY AND BOX, REMOVE CABLE COMPLETE TO SOURCE.
3. REMOVE SURFACE RACEWAY.
4. REMOVE SURFACE RACEWAY AND BOX.
5. REMOVE SURFACE RACEWAY AND TOKEN RING CABLE.
6. REMOVE CABLE HANGING FROM CEILING COMPLETE TO SOURCE.
7. POWER POLE: REMOVE AND COIL DATA CABLES ABOVE CEILING AND PROTECT FOR RE-INSTALLATION, REMOVE POWER/DATA POLE.
8. REMOVE COVER AND PROVIDE BRUSHED STAINLESS BLANK COVER.
9. PROJECTOR: PROJECTOR SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. PROTECT ALL CABLES FROM WALL BOX TO CEILING PAN FOR RELOCATION.
10. CEILING MOUNTED SPEAKERS: PRIOR TO DEMOLITION LABEL SPEAKER WITH CURRENT ROOM LOCATION, REMOVE SPEAKER AND PROTECT FOR REINSTALLATION. PROTECT CABLE AND CONDUIT IN PLACE FOR RECONNECTION.
12. WALL MOUNTED PIM DEVICE: PRIOR TO DEMOLITION COORDINATE WITH NEW HANOVER COUNTY SCHOOLS SECURITY DEPT (JAMES DILLON). NEW HANOVER COUNTY SCHOOLS SECURITY DEPT. SHALL REMOVE AND STORE PIMS DEVICES AND EQUIPMENT DURING DEMOLITION AND CONSTRUCTION.
12. WAP: PRIOR TO DEMOLITION COORDINATE WITH NEW HANOVER COUNTY SCHOOLS IT DEPT (JAMOS BLACKBURN). NEW HANOVER COUNTY SCHOOLS SECURITY DEPT. SHALL REMOVE AND STORE WAP DEVICES AND EQUIPMENT DURING DEMOLITION AND CONSTRUCTION.
13. REMOVE ABANDONED WALL CABINET.
14. REMOVE VOICE CABLE ONLY, INTERCOM CABLE AND WALL MOUNTED CABINET SHALL REMAIN OPERATIONAL.
15. EQUIPMENT: PROTECT IN PLACE, EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
16. SHORT THROW WALL PROJECTOR: PROJECTOR SHALL BE REMOVED, STORED AND PROTECTED DURING DEMOLITION AND CONSTRUCTION BY A QUALIFIED VENDOR. PROTECT ALL CABLES FOR INSTALLATION.

ALTERNATE KEYED NOTES

A4.1 PROJECTOR: PROJECTOR SHALL BE REMOVED BY A QUALIFIED VENDOR AND TURNED OVER TO OWNER. PROJECTOR CEILING PAN SHALL BE STORED FOR INSTALLATION IN NEW CEILING GRID. REMOVE ALL AV CABLES FROM PROJECTOR CEILING PAN TO WALL MOUNTED AV BOXES. REMOVE PROJECTOR EXTENSION POLE AND PROVIDE BLANK COVER IN PROJECTOR CEILING PAN.

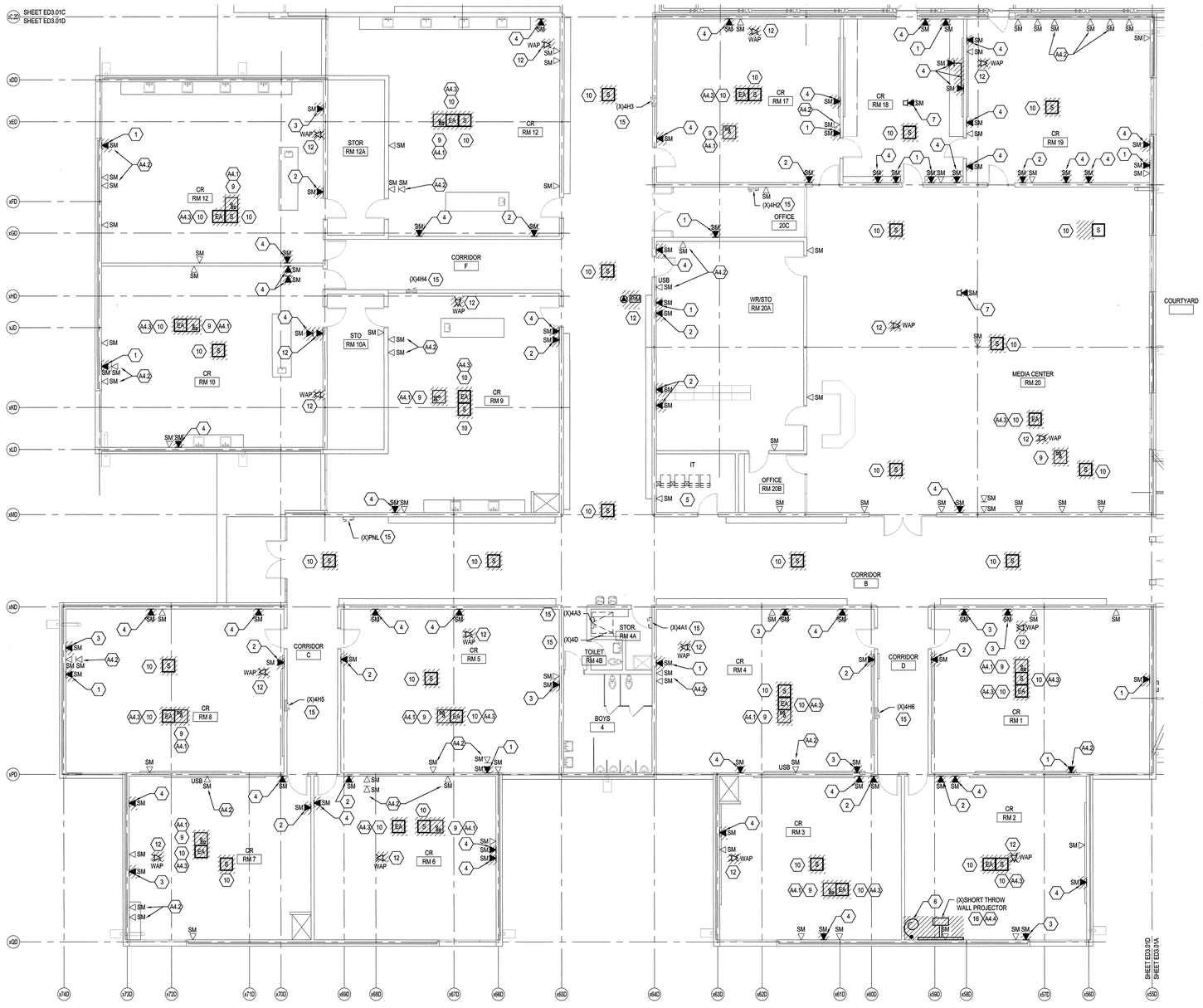
A4.2 TEACHERS STATION: SMART BOARD SHALL BE REMOVED BY QUALIFIED VENDOR AND TURNED OVER TO OWNER. REMOVE ALL AV CABLING, AND CONNECTIONS IN EXISTING AV BOXES ASSOCIATED WITH TEACHERS STATION. PROVIDE BLANK FACEPLATE FOR REMAINING BOX. EXISTING DATA CABLES, DATA FACEPLATES AND RACEWAY SHALL REMAIN OPERATIONAL DURING DEMOLITION AND CONSTRUCTION.
NOTE: NOT ALL CONDITIONS AT TEACHERS STATION ARE TYPICAL, PRIOR TO DEMOLITION CONTRACTOR SHALL VERIFY EACH TEACHERS STATION LOCATION WITH N.H. Co. IT DEPARTMENT.

A4.3 EA SPEAKER: DISCONNECT AND REMOVE SPEAKER, REMOVE SPEAKER CABLE FROM SPEAKER TO SURFACE MOUNTED BOX AT TEACHERS STATION.

A4.4 SHORT THROW WALL PROJECTOR: PROJECTOR SHALL BE REMOVED, REMOVE ALL ASSOCIATED CABLES.

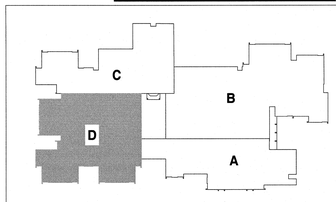
DEMOLITION NOTES

1. FINISHES IN AREAS AROUND DEVICES SHALL BE REPAIRED/REPLACED TO MATCH EXISTING AREAS (EX. NEW CEILING TILE WHERE DEVICE AND BOX IS REMOVED, ETC.).
2. PROTECT ALL EXISTING DATA AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ENGINEER IN WRITING IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.



FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED3.01D **Demolition Voice/Data Floor Plan - Area D**
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION VOICE,DATA FLOOR PLAN - AREA D

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

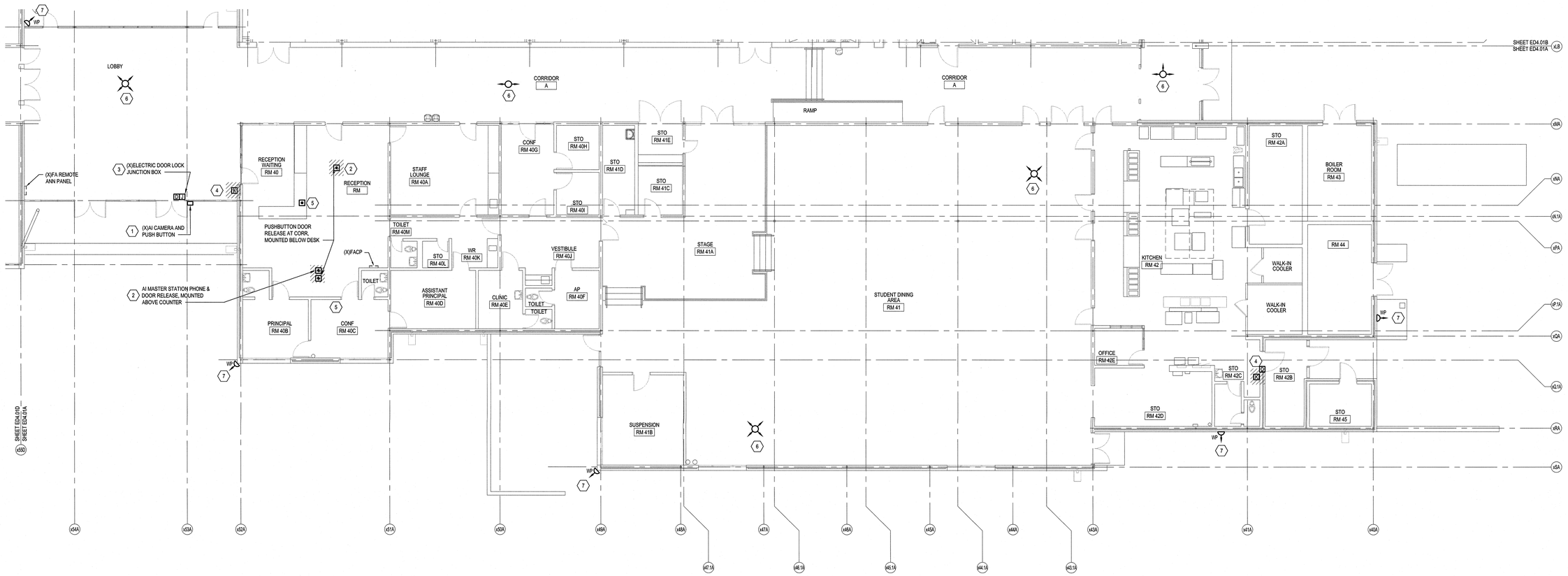
SHEET NUMBER ED3.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CRIBB

2-4-19

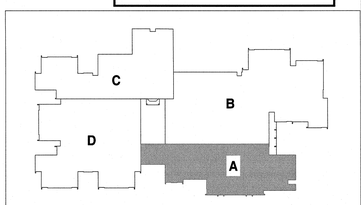


DEMOLITION KEYED NOTES

1. AI MASTER STATION: PROTECT EXTERIOR AI PUSH BUTTON AND CAMERA, PROTECT ALL CABLE FROM EXTERIOR PUSH BUTTON AND CAMERA TO AI MASTER STATION LOCATIONS IN RECEPTION/WAITING FOR RECONNECTION.
2. AI MASTER STATION: QUALIFIED SECURITY VENDOR SHALL REMOVE AND PROTECT AI MASTER STATION LOCATED IN RECEPTION/WAITING AREA FOR REINSTALLATION, COORDINATE WITH NEW HANOVER COUNTY SCHOOLS (JAMES DILLON) PRIOR TO DEMOLITION.
3. ELECTRIC DOOR LOCK: PROTECT ALL DOOR RELATED POWER, OPERATORS AND CABLES DURING DEMOLITION AND CONSTRUCTION.
4. KEY PAD: REMOVE KEY PAD, REMOVE CONDUCTORS COMPLETE TO SOURCE.
5. PANIC BUTTON: REMOVE BUTTON AND ALL CONDUIT AND CONDUCTORS COMPLETE TO SOURCE. WALL/CEILING MOUNTED CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL BE REMOVE AND STORED BY N.C. SOUND. DATA CABLES SHALL REMAIN PROTECTED IN PLACE FOR RECONNECTION.
6. WALL/CEILING MOUNTED CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL BE REMOVE AND STORED BY N.C. SOUND. DATA CABLES SHALL REMAIN PROTECTED IN PLACE FOR RECONNECTION.
7. EXTERIOR CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL REMAIN PROTECTED AND IN PLACE DURING DEMOLITION AND CONSTRUCTION. CAMERAS SHALL BE FULLY OPERATIONAL AT THE END OF CONSTRUCTION.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED4.01A **Demolition Systems Floor Plan - A**
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

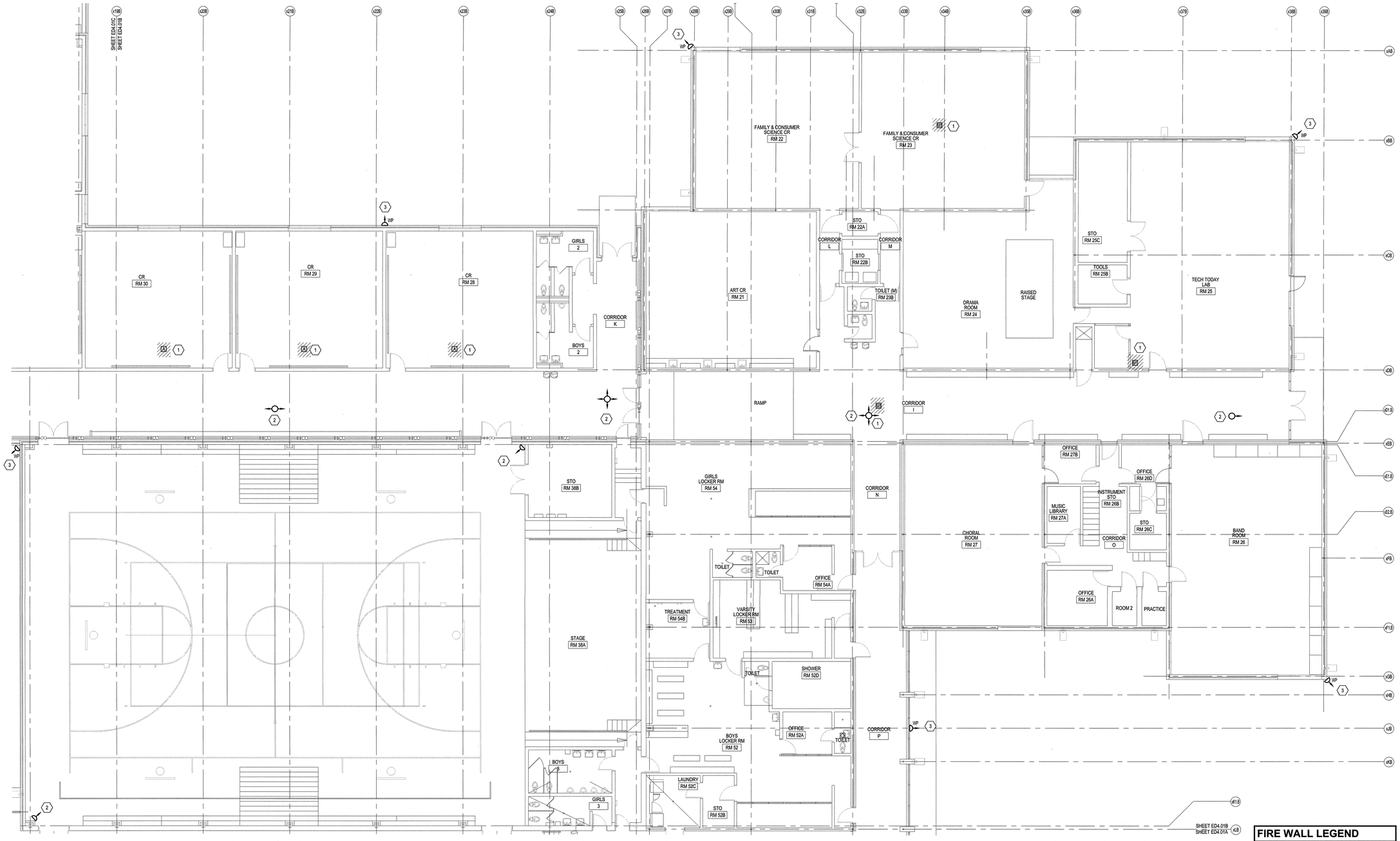
6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION SYSTEMS FLOOR PLAN - A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED4.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

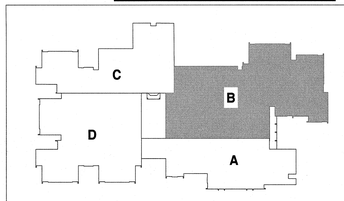


DEMOLITION KEYED NOTES

1. SECURITY EQUIPMENT: REMOVE DEVICES, BOXES AND ALL SECURITY CABLE COMPLETE TO SOURCE, COORDINATE WITH NEW HANOVER COUNTY SCHOOLS (JAMES DILLON) PRIOR TO DEMOLITION.
2. WALL/CEILING MOUNTED CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL BE REMOVE AND STORED BY N.C. SOUND. DATA CABLES SHALL REMAIN PROTECTED IN PLACE FOR RECONNECTION.
3. EXTERIOR CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL REMAIN PROTECTED AND IN PLACE DURING DEMOLITION AND CONSTRUCTION. CAMERAS SHALL BE FULLY OPERATIONAL AT THE END OF CONSTRUCTION.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED4.01B **Demolition Systems Floor Plan - B**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF

2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

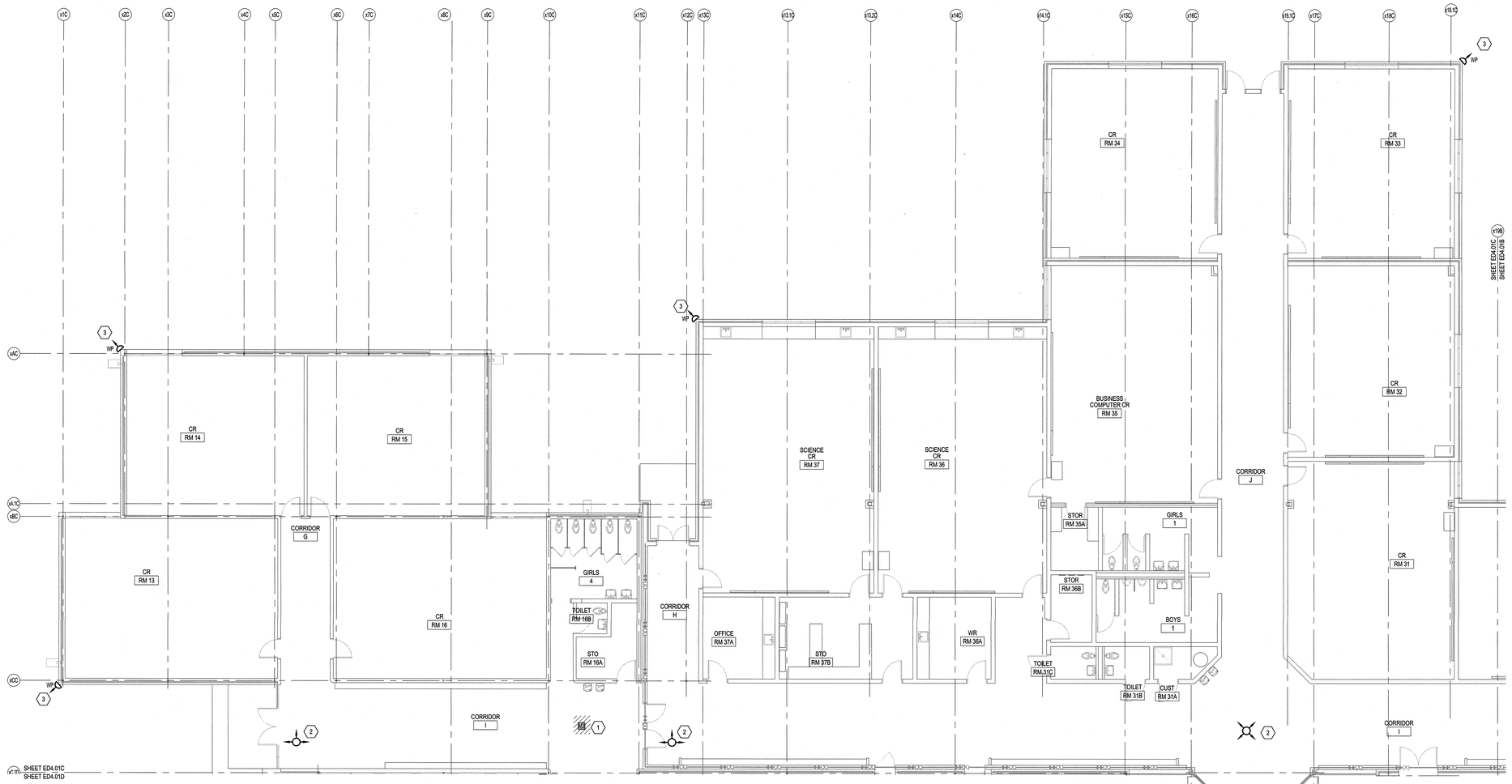
DEMOLITION SYSTEMS FLOOR PLAN - B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER ED4.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



DEMOLITION KEYED NOTES

1. SECURITY EQUIPMENT: REMOVE DEVICES, BOXES AND ALL SECURITY CABLE COMPLETE TO SOURCE, COORDINATE WITH NEW HANOVER COUNTY SCHOOLS (JAMES DILLON) PRIOR TO DEMOLITION.
2. WALL/CEILING MOUNTED CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL BE REMOVE AND STORED BY N.C. SOUND. DATA CABLES SHALL REMAIN PROTECTED IN PLACE FOR RECONNECTION.
3. EXTERIOR CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL REMAIN PROTECTED AND IN PLACE DURING DEMOLITION AND CONSTRUCTION. CAMERAS SHALL BE FULLY OPERATIONAL AT THE END OF CONSTRUCTION.

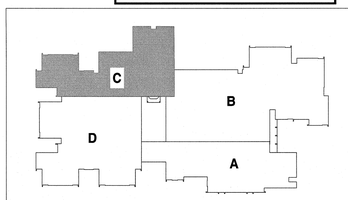
FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

TRUE PLAN NORTH

1 ED4.01C **Demolition Systems Floor Plan - C**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"



KEY PLAN

SEAL 023311 ENGINEER W. ALLEN CRUSE NORTH CAROLINA

2-4-19

Renovations to:
M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

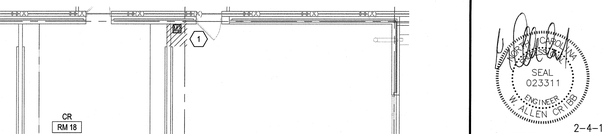
DEMOLITION SYSTEMS FLOOR PLAN - C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

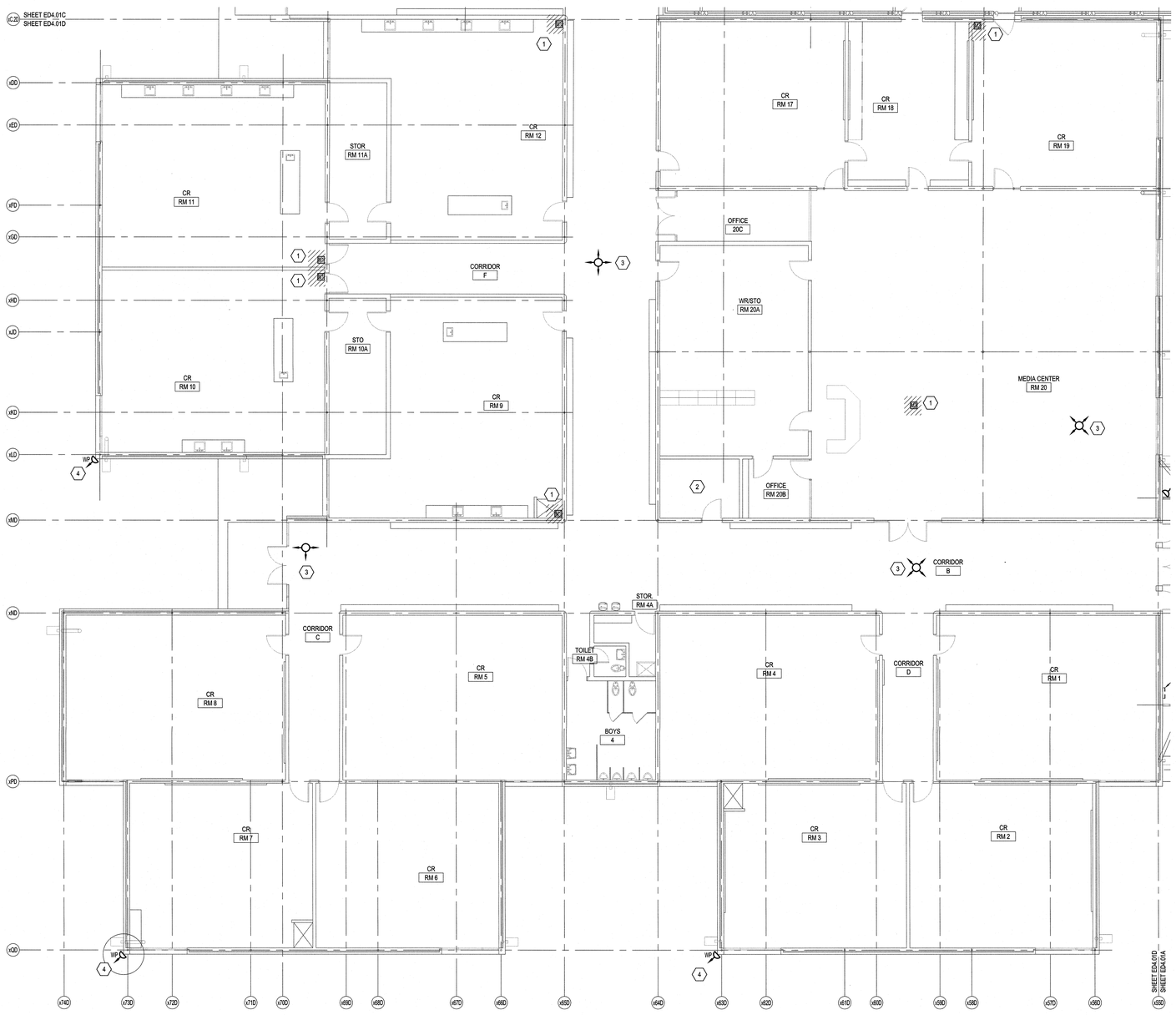
SHEET NUMBER
ED4.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



2–4–19

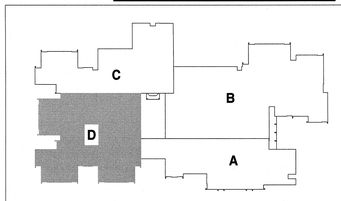


DEMOLITION KEYED NOTES

1. SECURITY EQUIPMENT: REMOVE SECURITY PANEL, DEVICES AND ALL SECURITY CABLE COMPLETE TO SOURCE, COORDINATE WITH NEW HANOVER COUNTY SCHOOLS JAMES DILLON PRIOR TO DEMOLITION.
2. SECURITY PANEL: REMOVE SECURITY PANEL AND ALL SECURITY CABLE COMPLETE TO SOURCE, COORDINATE WITH NEW HANOVER COUNTY SCHOOLS (JAMES DILLON) PRIOR TO DEMOLITION.
3. WALL/CEILING MOUNTED CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL BE REMOVE AND STORED BY N.C. SOUND. DATA CABLES SHALL REMAIN PROTECTED IN PLACE FOR RECONNECTION.
4. EXTERIOR CAMERAS: CAMERAS ARE STILL UNDER WARRANTY AND SHALL REMAIN PROTECTED AND IN PLACE DURING DEMOLITION AND CONSTRUCTION. CAMERAS SHALL BE FULLY OPERATIONAL AT THE END OF CONSTRUCTION.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 ED4.01D **Demolition Systems Floor Plan - D**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

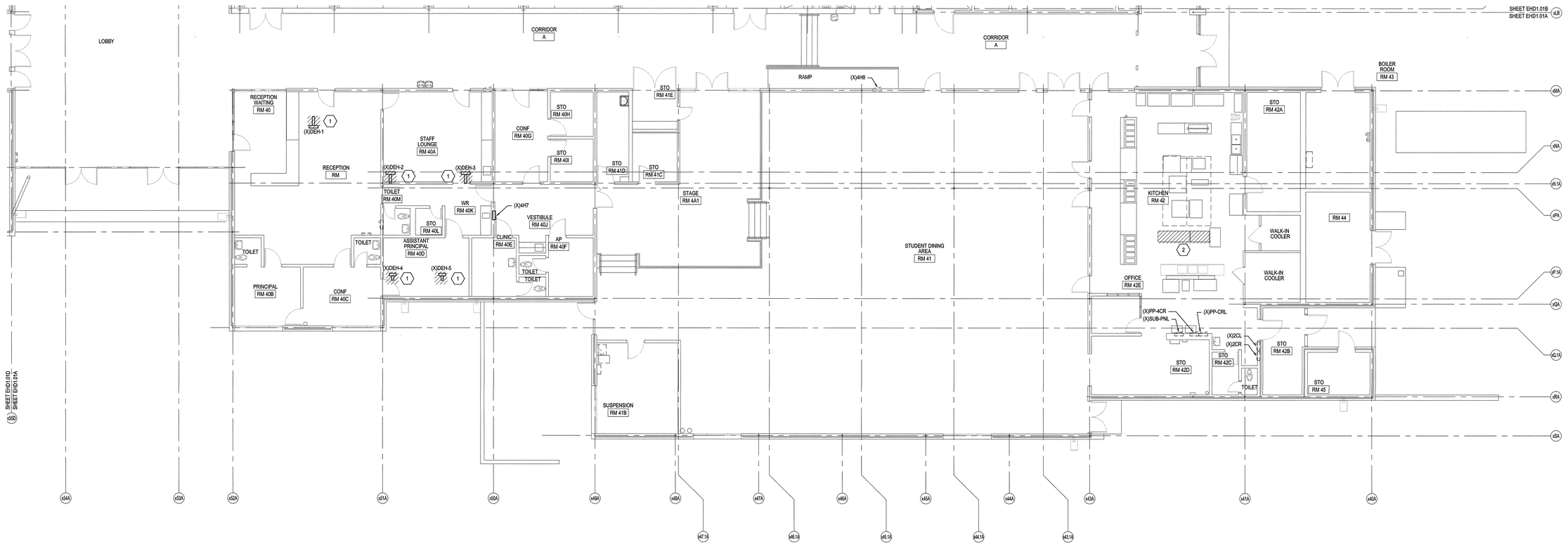
DEMOLITION SYSTEMS
FLOOR PLAN - D

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER
ED4.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

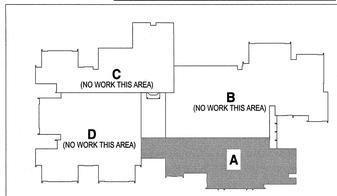


KEYED NOTES THIS SHEET ONLY

1. DEH: REMOVE DISCONNECT SWITCH, REMOVE CONDUIT AND CONDUCTORS COMPLETE TO SOURCE.
2. HOOD CONTROL PANEL: REMOVE CONDUIT AND CONDUCTORS COMPLETE TO SOURCE. REMOVE CONDUIT AND CONDUCTORS COMPLETE TO (X)EF-1 & (X)MUA-1 ON ROOF. REMOVE LIGHTING AND CONTROL CONDUIT AND CONDUCTORS COMPLETE TO SOURCE.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / EHD1.01A — Demolition HVAC Power Floor Plan - Area A

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

0' 4' 8' 16'
1/8" = 1'-0"

2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

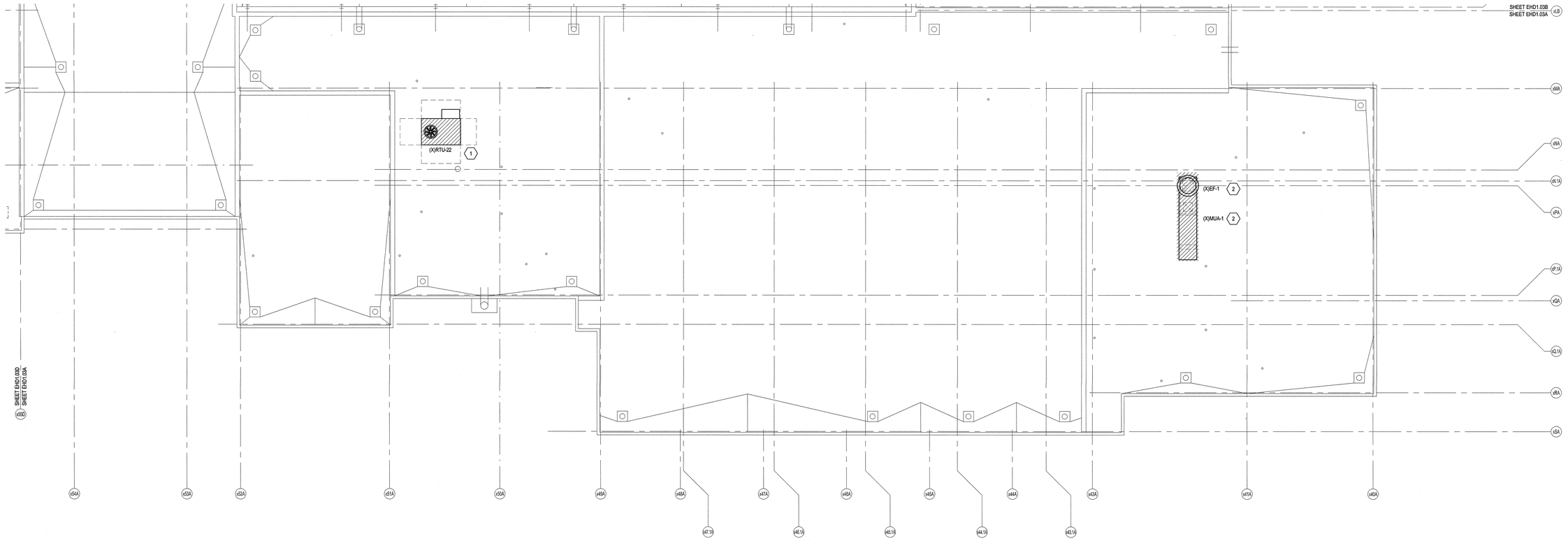
DEMOLITION HVAC POWER FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER EHD1.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

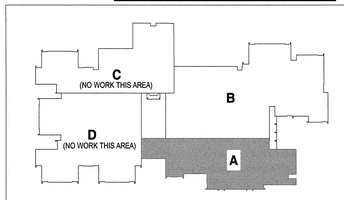


KEYED NOTES THIS SHEET ONLY

1. (X)RTU22: REMOVE DISCONNECT, CONDUIT AND CONDUCTORS COMPLETE TO SOURCE.
2. (X)EF-1 & (X)MUA-1: REMOVE DISCONNECT, CONDUIT AND CONDUCTORS COMPLETE TO SOURCE.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL	
2-HOUR RATED WALL	



KEY PLAN

TRUE PLAN NORTH

1 EHD1.03A **Demolition HVAC Power Roof Plan - Area A**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION HVAC POWER ROOF PLAN - AREA A

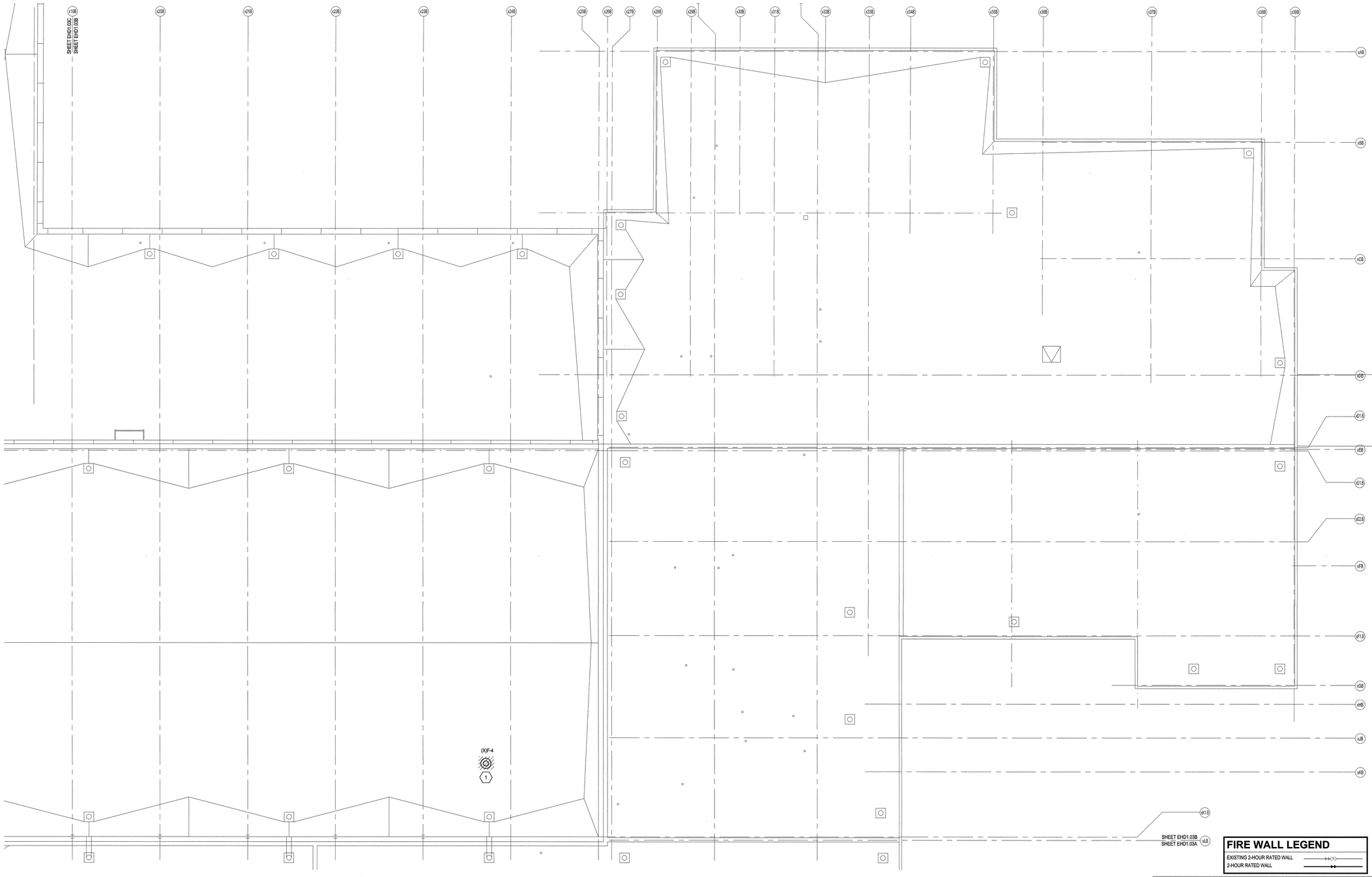
JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER EHD1.03A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CRUMP
2-4-19

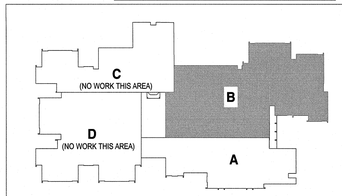


KEYED NOTES THIS SHEET ONLY

1 EXHAUST FAN: REMOVE DISCONNECT, PROTECT CONDUIT AND CONDUCTORS COMPLETE TO SOURCE.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / EHD1.03B **Demolition HVAC Power Roof Plan - Area B**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION HVAC POWER ROOF PLAN - AREA B

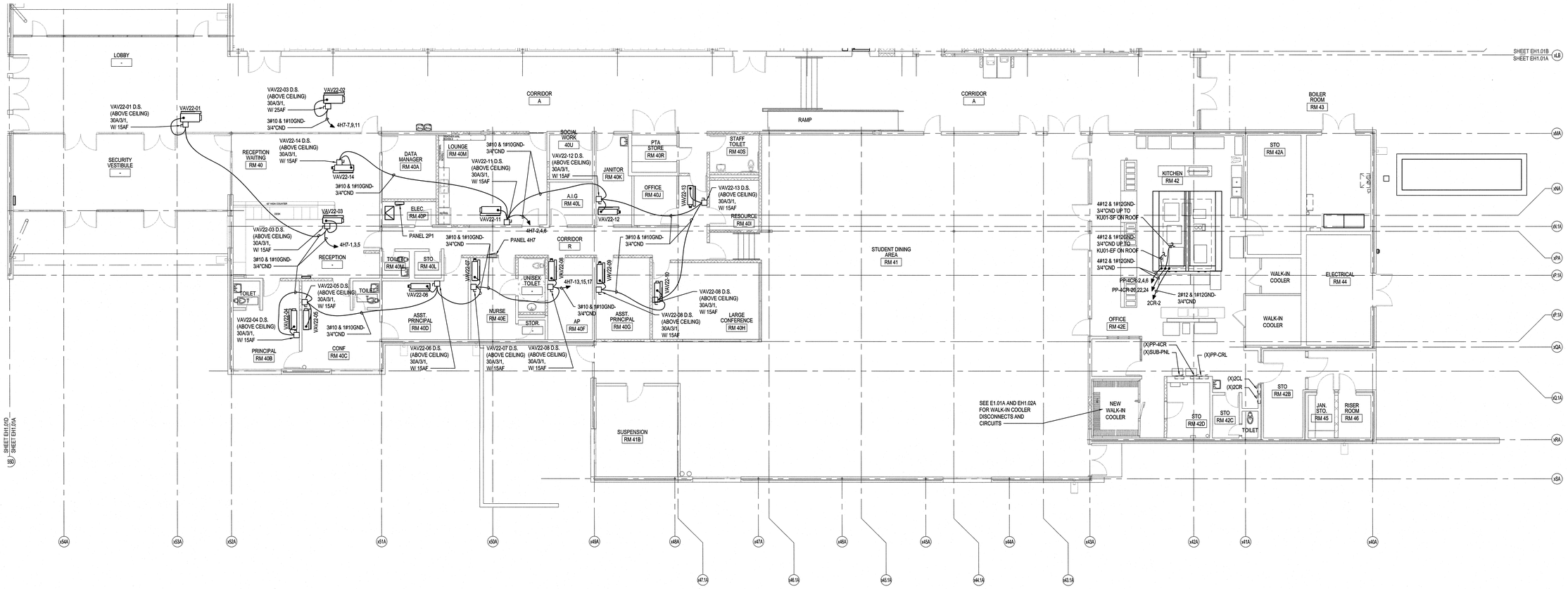
JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER
EHD1.03B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

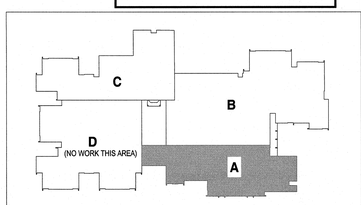
BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER WILLIAM ALLEN CBHF
2-4-19



FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 EH1.01A **HVAC Power Floor Plan - Area A**
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

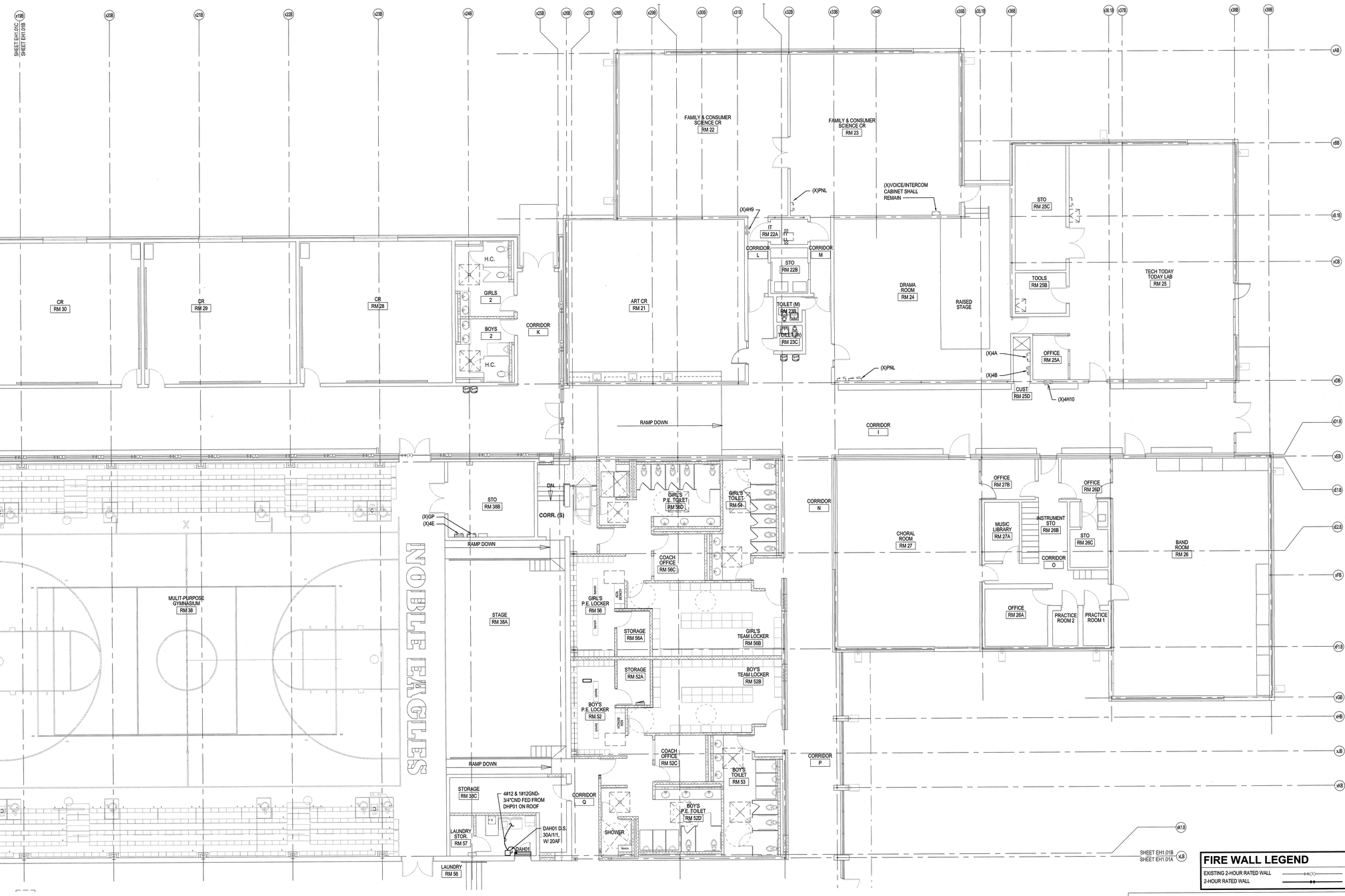
HVAC POWER FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

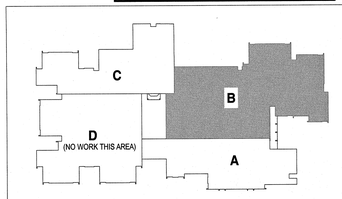
SHEET NUMBER EH1.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



FIRE WALL LEGEND
EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 EH1.01B **Power Floor Plan - Area B**
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

POWER FLOOR PLAN - AREA B

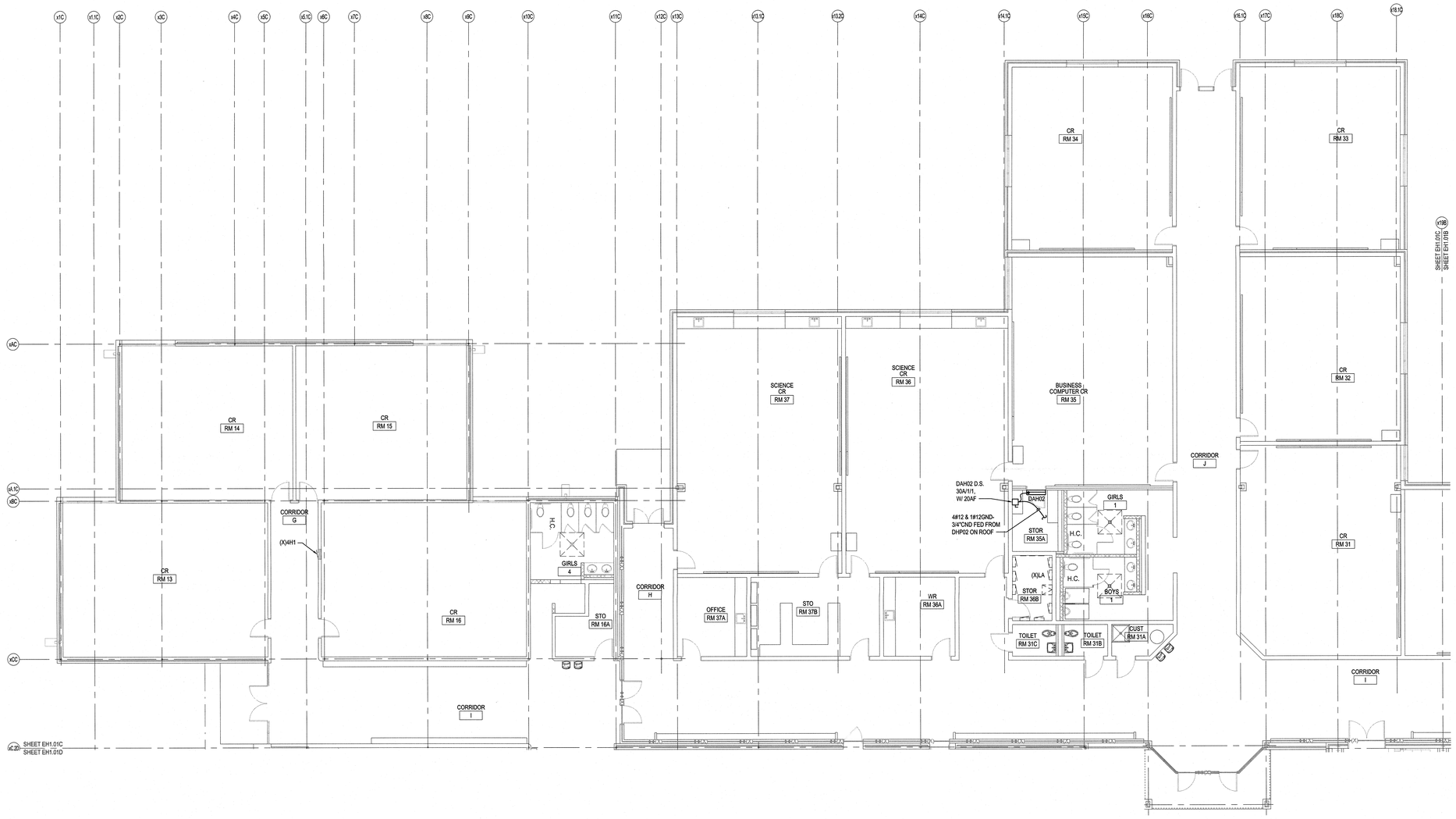
JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER EH1.01B

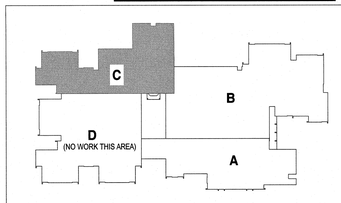
2-4-19

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



FIRE WALL LEGEND
EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 EH1.01C **Power Floor Plan - Area C**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

2–4–19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

POWER FLOOR PLAN - AREA C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

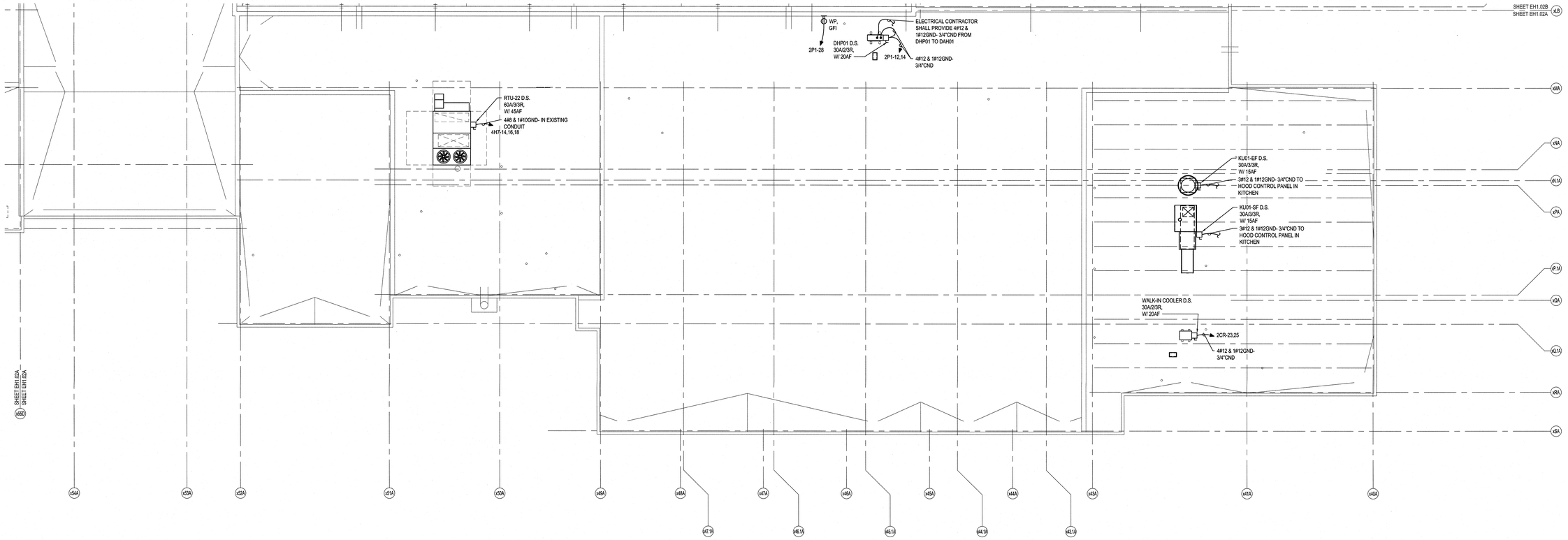
SHEET NUMBER
EH1.01C

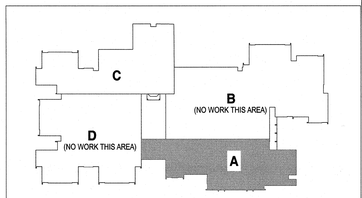
CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



2–4–19





KEY PLAN

TRUE PLAN NORTH

1 EH1.02A **HVAC Power Roof Plan - Area A**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

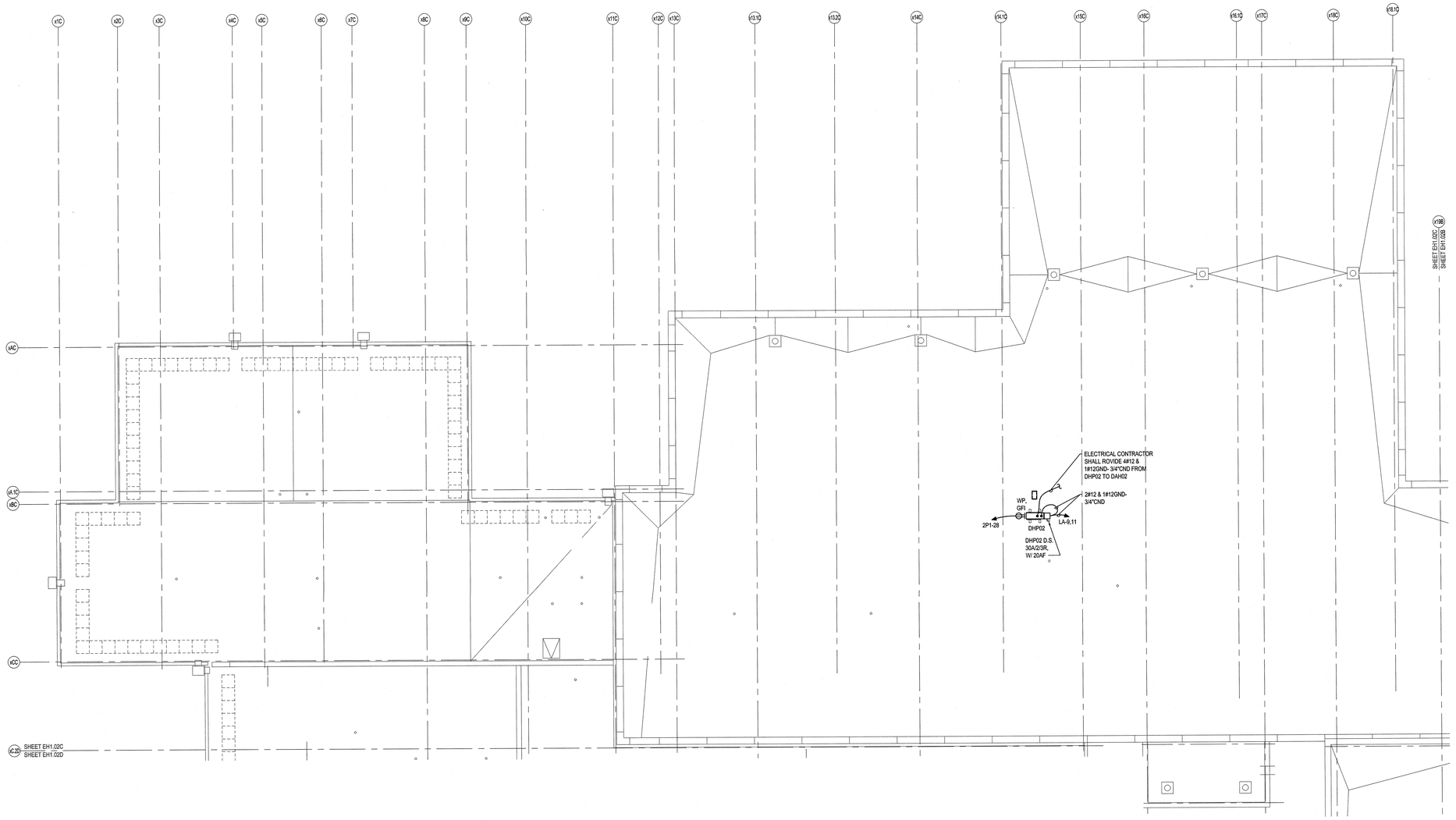
6520 Market Street
Wilmington, North Carolina 28405

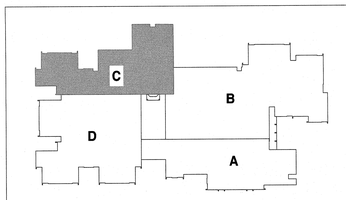
HVAC POWER ROOF PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER
EH1.02A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC





KEY PLAN

TRUE PLAN NORTH

1 / E1.02C Power Roof Plan - Area C
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER WILLIAM A. ALLEN JR. 1789
2-4-19

Renovations to: M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

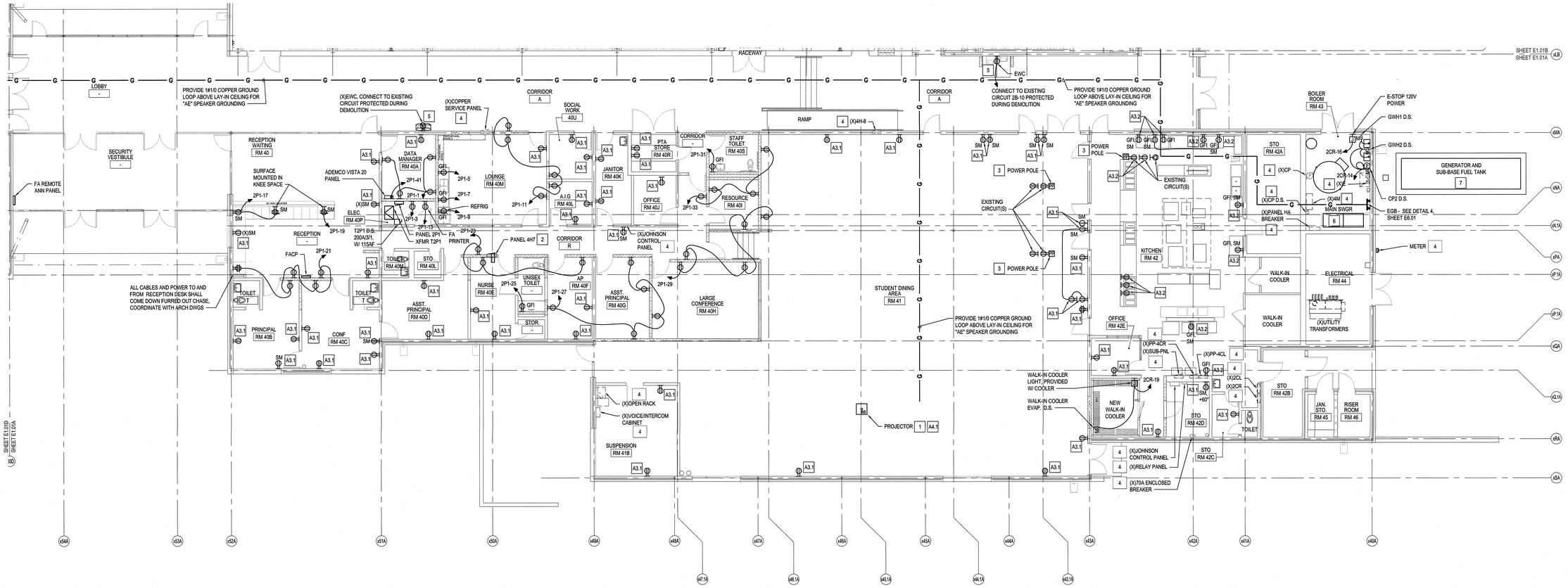
POWER ROOF PLAN - AREA C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER
EH1.02C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



KEYED NOTES THIS SHEET ONLY

1. PROJECTOR: PROVIDE 2#12 & 1#12GND- 3/4" CND AND EXTEND CIRCUIT TO PROJECTOR PAN IN LOCATION INDICATED. RECONNECT DUPLEX RECEPTACLE IN PROJECTOR PAN.
2. PROVIDE JUNCTION BOX, (1) ABOVE CEILING AS REQUIRED TO EXTEND PANEL CONDUIT AND CONDUCTORS TO PANEL 4H7 NEW LOCATION, SEE RISER DIAGRAM
3. POWER POLE: CONNECT RECEPTACLES TO CONDUCTORS REMOVED AND PROTECTED ABOVE CEILING DURING DEMOLITION.
4. EQUIPMENT: EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
5. EWC: ELECTRICAL CONTRACTOR SHALL TRACE EXISTING EWC CIRCUIT AND REPLACE BREAKER WITH GFI BREAKER, PROVIDE DUPLEX RECEPTACLE AND PROVIDE ALL NEW CONDUCTORS FROM GFI BREAKER TO RECETPACLE, NEUTRAL CONDUCTORS SHALL BE DEDICATED PER BREAKER AND NOT SHARED.
6. MAIN SWGR: SEE RISER DIAGRAM. RECONNECT BRANCH CIRCUITS REMOVED AND PROTECTED DURING DEMOLITION.
7. GENERATOR AND MTS: GENERATOR AND MTS IS THE PROPERTY OF NEW HANOVER COUNTY. PROTECT GENERATOR IN PLACE, REMOVE MTS AND DELIVER TO NEW HANOVER COUNTY SCHOOLS FOR STORAGE, NEW HANOVER COUNTY SCHOOLS WILL DELIVER TO NEW HANOVER COUNTY AT A LATER DATE.

ALTERNATE KEYED NOTES

A3.1 ELECTRICAL CONTRACTOR SHALL PROVIDE RECEPTACLE AND FACEPLATE IN EXISTING BOX, CONNECT TO EXISTING CIRCUIT REMOVED AND PROTECTED DURING DEMOLITION.

A3.2 ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLE AND FACEPLATE IN EXISTING BOX, CONNECT TO EXISTING CIRCUIT REMOVED AND PROTECTED DURING DEMOLITION.

A4.1 PROJECTOR: EXISTING PROJECTOR CEILING PAN STORED DURING DEMOLITION SHALL BE LOCATED AS SHOWN. CONNECT EXISTING RECEPTACLE IN PROJECTOR CEILING PAN TO EXISTING RECEPTACLE CIRCUIT PROTECTED DURING DEMOLITION.

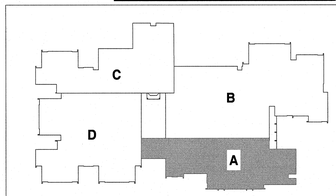
NOTE: IF ALTERNATE TAKEN TO INSTALL INTERACTIVE FLAT PANEL DISPLAY, PRIOR TO ANY ROUGH-IN AND INSTALLATION THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH NEW HANOVER COUNTY SCHOOLS AND GET APPROVAL FOR ALL FINAL LOCATIONS OF INTERACTIVE FLAT PANEL DISPLAYS AND TEACHER DESKS IN EACH CLASSROOM.

NOTE

1. ELECTRICAL CONTRACTOR SHALL SECURE ALL CABLES, CONDUIT AND BOXES LOCATED ABOVE CEILING IN PLACE THAT ARE TO REMAIN OR TO BE REUSED AND FASTENED PER NEC.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED SURFACE MOUNTED RACEWAY ON WALLS AND FLOORS.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 E1.01A **Power Floor Plan - Area A**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

CHRISTOPHER A. CHEEK
REGISTERED
PROFESSIONAL
ENGINEER
SEAL
023311
W. ALLEN CHEEK
ENGINEER
2–4–19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

POWER FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E1.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

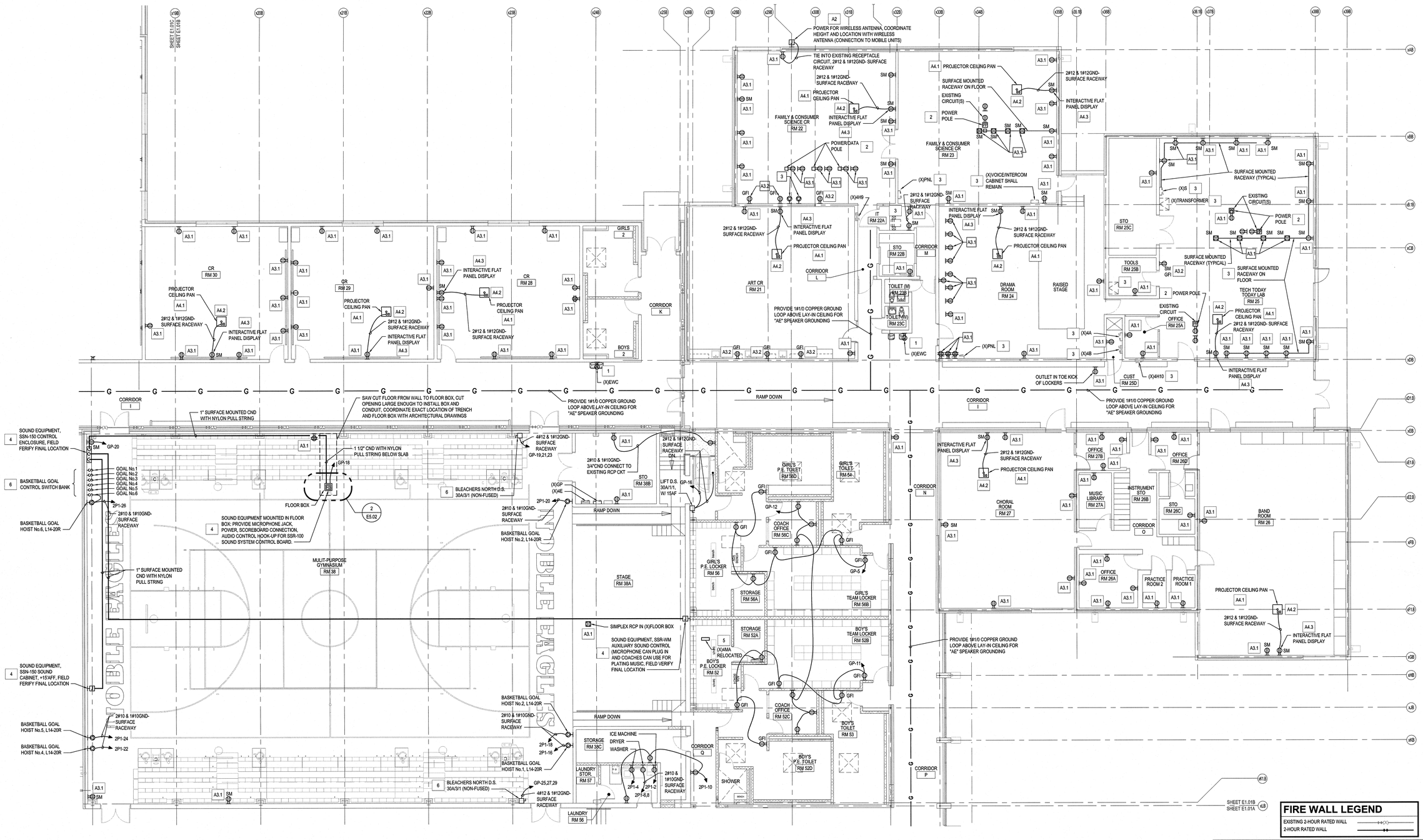
BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF CAROLINA

2–4–19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405



KEYED NOTES THIS SHEET ONLY

1. EWC: ELECTRICAL CONTRACTOR SHALL TRACE EXISTING EWC CIRCUIT AND REPLACE BREAKER WITH GFI BREAKER, PROVIDE DUPLEX RECEPTACLE AND PROVIDE ALL NEW CONDUCTORS FROM GFI BREAKER TO RECETPACLE, NEUTRAL CONDUCTORS SHALL BE DEDICATED PER BREAKER AND NOT SHARED.
2. POWER POLE: CONNECT RECEPTACLES TO CONDUCTORS REMOVED AND PROTECTED ABOVE CEILING DURING DEMOLITION.
3. EQUIPMENT: EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
4. SOUND EQUIPMENT: SOUND SYSTEM PURCHASED BY NEW HANOVER COUNTY, SYSTEM SHALL BE WIRELESS WITH REDUNDANT HARDWIRE CONNECTIONS SIMILAR TO DAKTRONICS. SOUND SYSTEM AND ALL HARDWARE,CONNECTIONS AND RACEWAY SHALL BE INSTALLED BY THE AV CONTRACTOR.
5. (X)PANEL 4MA: REWORK EXISTING FEEDER CONDUIT AND CONDUCTORS TO ROUTE TO NEW LOCATION OF PANEL 4MA, SEE PLAN ON SHEET E1.01B. PROVIDE JUNCTION BOX ABOVE CEILING AS REQUIRED TO EXTEND BRANCH CIRCUIT CONDUIT AND CONDUCTORS TO PANEL 4MA NEW LOCATION, SEE RISER DIAGRAM
6. INTERCONNECT BLEACHER CONTROLS AND CROSS-COURT BACKBOARDS SUCH THAT WHEN BLEACHERS ARE EXTENDED CROSS-COURT BACKBOARDS CANNOT BE LOWERED AND WHEN BACKBOARDS ARE LOWERED, BLEACHERS CANNOT BE EXTENDED. PROVIDE ALL RELAYS, CONTACTS AND WIRING REQUIRED TO PROVIDE COMPLETE OPERATING SYSTEM. SWITCHES SHALL BE KEYED TYPE IN LOCKABLE ENCLOSURE.

ALTERNATE KEYED NOTES

- A2 MOBILE UNITS: ALL INFRASTRUCTURE INCLUDING BUT NOT LIMITED TO UTILITY POWER, DISTRIBUTION PANEL, FIRE ALARM, SECURITY, DATA, PA ETC...
- A3.1 ELECTRICAL CONTRACTOR SHALL PROVIDE RECEPTACLE AND FACEPLATE IN EXISTING BOX, CONNECT TO EXISTING CIRCUIT REMOVED AND PROTECTED DURING DEMOLITION.
- A3.2 ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLE AND FACEPLATE IN EXISTING BOX, CONNECT TO EXISTING CIRCUIT REMOVED AND PROTECTED DURING DEMOLITION.
- A4.1 EXISTING PROJECTOR CEILING PAN STORED DURING DEMOLITION SHALL BE LOCATED AS SHOWN, CONNECT EXISTING RECEPTACLE IN PROJECTOR CEILING PAN TO EXISTING RECEPTACLE CIRCUIT PROTECTED DURING DEMOLITION.SEE DETAIL 4, SHEET E5.02.
- A4.2 EA SPEAKER: LOCATE SPEAKER IN LOCATION INDICATED, CONNECT SPEAKER CABLE FROM 3.5MM JACK LOCATED IN SURFACE BOX AT TEACHERS STATION. POWER SPEAKER FROM RECEPTACLE MOUNTED IN PROJECTOR CEILING PAN. SEE DETAIL 4, SHEET E5.02.
- A4.3 INTERACTIVE FLAT PANEL DISPLAY: PROVIDE SURFACE MOUNTED DUPLEX RECEPTACLE ABOVE SCREEN, SEE DETAIL 4, SHEET E5.02

  NOTE: IF ALTERNATE TAKEN TO INSTALL INTERACTIVE PLAT PANEL DISPLAY, PRIOR TO ANY ROUGH-IN AND INSTALLATION THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH NEW HANOVER COUNTY SCHOOLS AND GET APPROVAL FOR ALL FINAL LOCATIONS OF INTERACTIVE FLAT PANEL DISPLAYS AND TEACHER DESKS IN EACH CLASSROOM.

NOTE

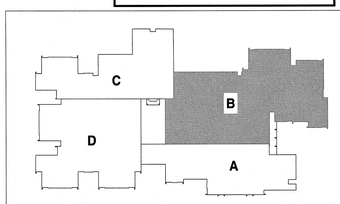
1. ELECTRICAL CONTRACTOR SHALL SECURE ALL CABLES, CONDUIT AND BOXES LOCATED ABOVE CEILING IN PLACE THAT ARE TO REMAIN OR TO BE REUSED AND FASTENED PER NEC.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED SURFACE MOUNTED RACEWAY ON WALLS AND FLOORS.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

TRUE PLAN NORTH

1 E1.01B **Power Floor Plan - Area B**
scale: 1/8" = 1'-0"
0' 4' 8' 16' 1/8" = 1'-0"



KEY PLAN

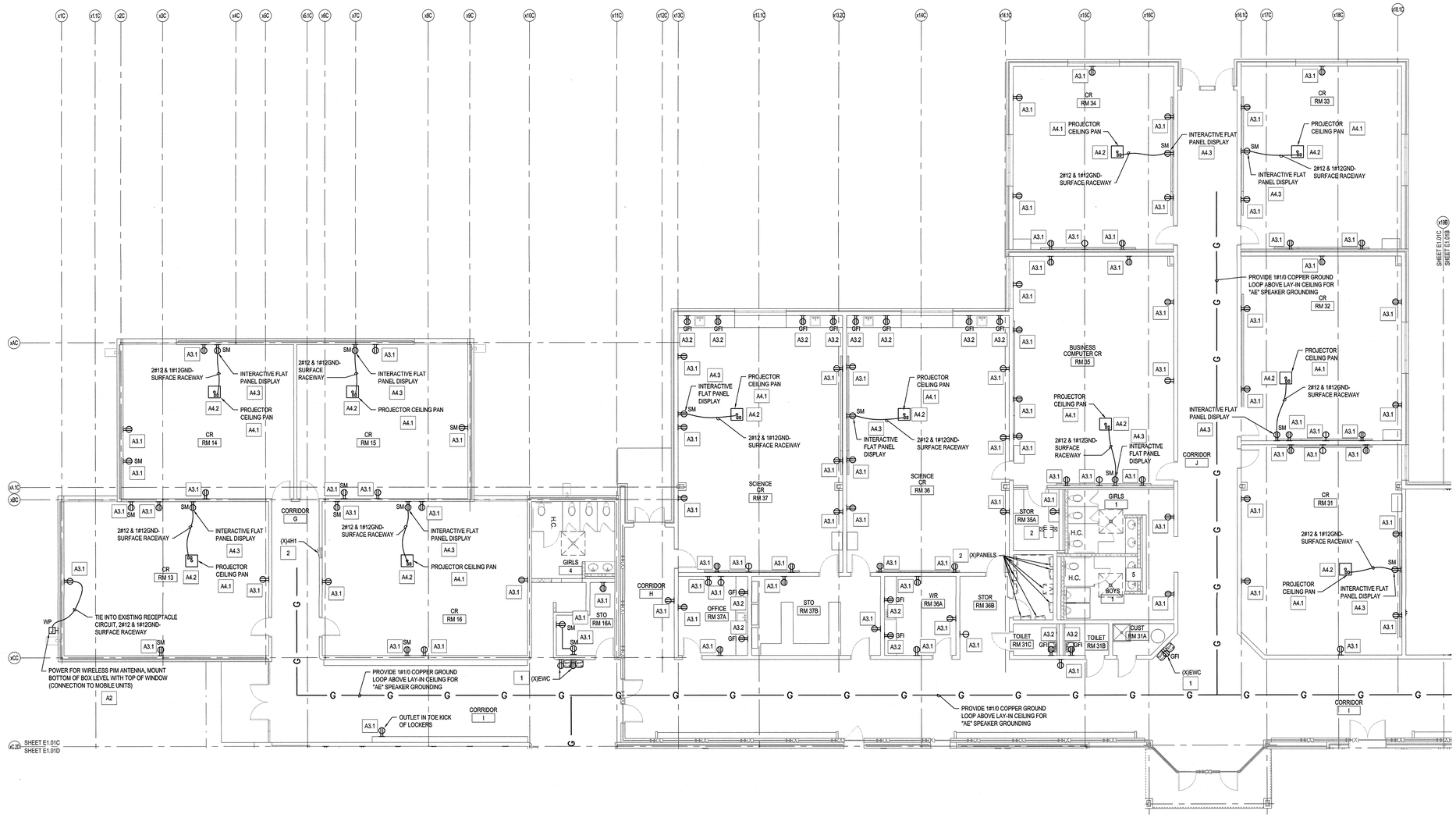
POWER FLOOR PLAN - AREA B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E1.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



KEYED NOTES THIS SHEET ONLY

1. EWC: ELECTRICAL CONTRACTOR SHALL TRACE EXISTING EWC CIRCUIT AND REPLACE BREAKER WITH GFI BREAKER, PROVIDE DUPLEX RECEPTACLE AND NEW CONDUCTORS, NEUTRAL CONDUCTORS SHALL BE DEDICATED PER BREAKER AND NOT SHARED.
2. EQUIPMENT: EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.

ALTERNATE KEYED NOTES

- A2 MOBILE UNITS: ALL INFRASTRUCTURE INCLUDING BUT NOT LIMITED TO UTILITY POWER, DISTRIBUTION PANEL, FIRE ALARM, SECURITY, DATA, PA ETC...
- A3.1 ELECTRICAL CONTRACTOR SHALL PROVIDE RECEPTACLE AND FACEPLATE IN EXISTING BOX, CONNECT TO EXISTING CIRCUIT REMOVED AND PROTECTED DURING DEMOLITION.
- A3.2 ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLE AND FACEPLATE IN EXISTING BOX, CONNECT TO EXISTING CIRCUIT REMOVED AND PROTECTED DURING DEMOLITION.
- A4.1 EXISTING PROJECTOR CEILING PAN STORED DURING DEMOLITION SHALL BE LOCATED AS SHOWN, CONNECT EXISTING RECEPTACLE IN PROJECTOR CEILING PAN TO EXISTING RECEPTACLE CIRCUIT PROTECTED DURING DEMOLITION.SEE DETAIL 4, SHEET E5.02.
- A4.2 EA SPEAKER: LOCATE SPEAKER IN LOCATION INDICATED, CONNECT SPEAKER CABLE FROM 3.5MM JACK LOCATED IN SURFACE BOX AT TEACHERS STATION. POWER SPEAKER FROM RECEPTACLE MOUNTED IN PROJECTOR CEILING PAN. SEE DETAIL 4, SHEET E5.02.
- A4.3 INTERACTIVE FLAT PANEL DISPLAY: PROVIDE SURFACE MOUNTED DUPLEX RECEPTACLE ABOVE SCREEN, SEE DETAIL 4, SHEET E5.02
- A4.4 INTERACTIVE FLAT PANEL DISPLAY: UTILIZE EXISTING SURFACE MOUNTED DUPLEX RECEPTACLE ABOVE SCREEN, ADJUST RECEPTACLE LOCATION TO ACCOMMODATE INTERACTIVE FLAT PANEL DISPLAY LOCATION , SEE DETAIL 4, SHEET E5.02

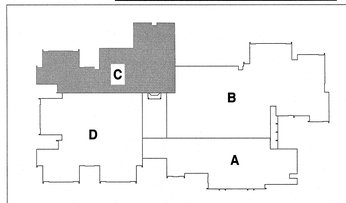
  NOTE: IF ALTERNATE TAKEN TO INSTALL INTERACTIVE PLAT PANEL DISPLAY, PRIOR TO ANY ROUGH-IN AND INSTALLATION THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH NEW HANOVER COUNTY SCHOOLS AND GET APPROVAL FOR ALL FINAL LOCATIONS OF INTERACTIVE FLAT PANEL DISPLAYS AND TEACHER DESKS IN EACH CLASSROOM.

NOTE

1. ELECTRICAL CONTRACTOR SHALL SECURE ALL CABLES, CONDUIT AND BOXES LOCATED ABOVE CEILING IN PLACE THAT ARE TO REMAIN OR TO BE REUSED AND FASTENED PER NEC.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED SURFACE MOUNTED RACEWAY ON WALLS AND FLOORS.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 E1.01C **Power Floor Plan - Area C**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

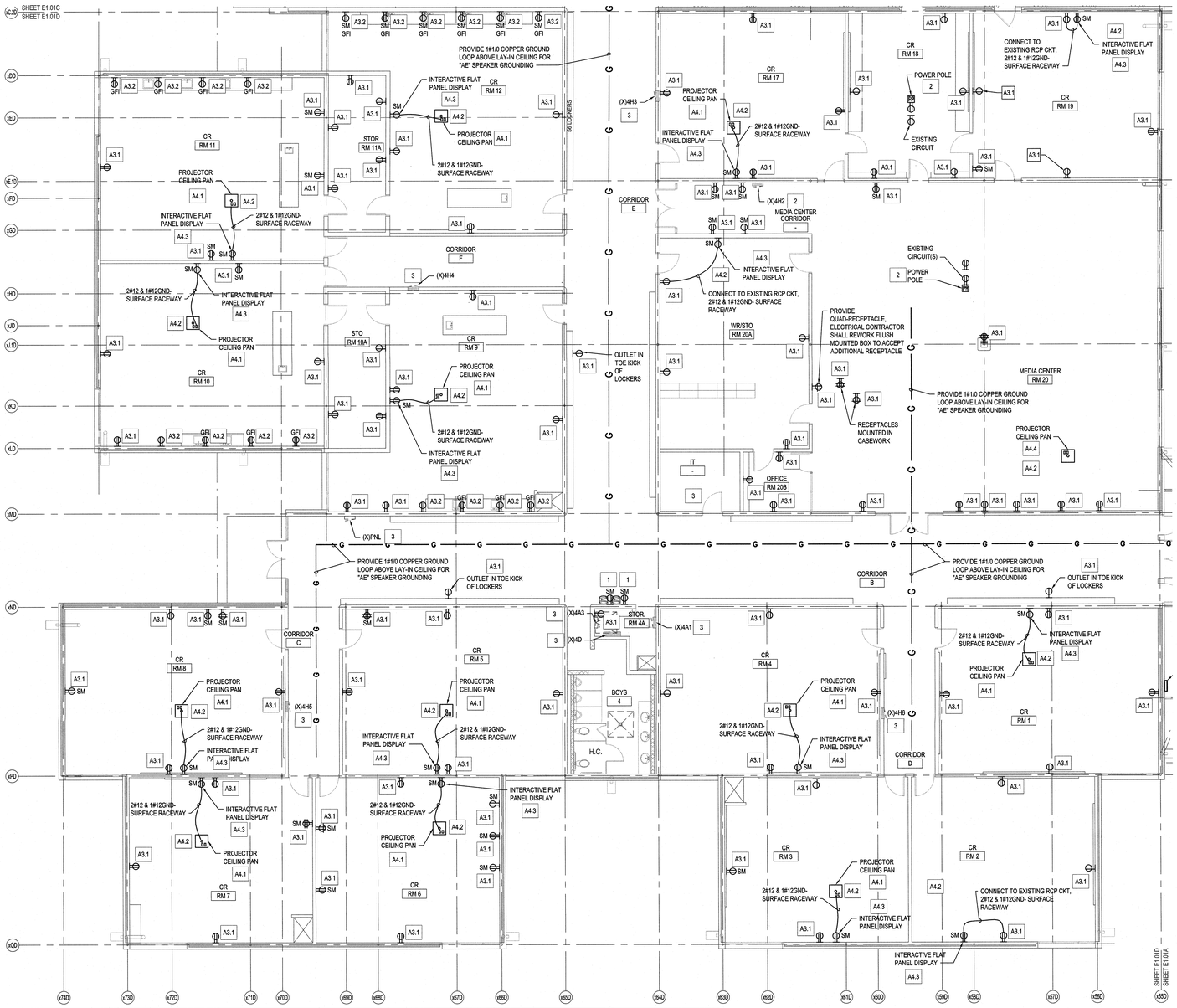
POWER FLOOR PLAN - AREA C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E1.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0806
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



KEYED NOTES THIS SHEET ONLY

1. EWC: ELECTRICAL CONTRACTOR SHALL TRACE EXISTING EWC CIRCUIT AND REPLACE BREAKER WITH GFI BREAKER, PROVIDE DUPLEX RECEPTACLE AND NEW CONDUCTORS, NEUTRAL CONDUCTORS SHALL BE DEDICATED PER BREAKER AND NOT SHARED.
2. POWER POLE: CONNECT RECEPTACLES TO CONDUCTORS REMOVED AND PROTECTED ABOVE CEILING DURING DEMOLITION.
3. EQUIPMENT: EQUIPMENT SHALL BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.

ALTERNATE KEYED NOTES

- A3.1 ELECTRICAL CONTRACTOR SHALL PROVIDE RECEPTACLE AND FACEPLATE IN EXISTING BOX, CONNECT TO EXISTING CIRCUIT REMOVED AND PROTECTED DURING DEMOLITION.
- A3.2 ELECTRICAL CONTRACTOR SHALL PROVIDE GFCI RECEPTACLE AND FACEPLATE IN EXISTING BOX, CONNECT TO EXISTING CIRCUIT REMOVED AND PROTECTED DURING DEMOLITION.
- A4.1 EXISTING PROJECTOR CEILING PAN STORED DURING DEMOLITION SHALL BE LOCATED AS SHOWN, CONNECT EXISTING RECEPTACLE IN PROJECTOR CEILING PAN TO EXISTING RECEPTACLE CIRCUIT PROTECTED DURING DEMOLITION.SEE DETAIL 4, SHEET E5.02.
- A4.2 EA SPEAKER: LOCATE SPEAKER IN LOCATION INDICATED, CONNECT SPEAKER CABLE FROM 3.5MM JACK LOCATED IN SURFACE BOX AT TEACHERS STATION. POWER SPEAKER FROM RECEPTACLE MOUNTED IN PROJECTOR CEILING PAN. SEE DETAIL 4, SHEET E5.02.
- A4.3 INTERACTIVE FLAT PANEL DISPLAY: PROVIDE SURFACE MOUNTED DUPLEX RECEPTACLE ABOVE SCREEN, SEE DETAIL 4, SHEET E5.02
- A4.4 PROJECTOR: EXISTING PROJECTOR CEILING PAN STORED DURING DEMOLITION SHALL BE LOCATED AS SHOWN, CONNECT EXISTING RECEPTACLE IN PROJECTOR CEILING PAN TO EXISTING RECEPTACLE CIRCUIT PROTECTED DURING DEMOLITION.

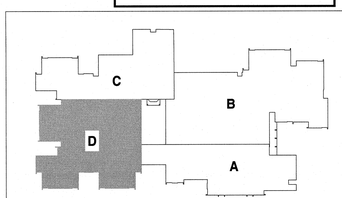
NOTE: IF ALTERNATE TAKEN TO INSTALL INTERACTIVE PLAT PANEL DISPLAY, PRIOR TO ANY ROUGH-IN AND INSTALLATION THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH NEW HANOVER COUNTY SCHOOLS AND GET APPROVAL FOR ALL FINAL LOCATIONS OF INTERACTIVE FLAT PANEL DISPLAYS AND TEACHER DESKS IN EACH CLASSROOM.

NOTE

1. ELECTRICAL CONTRACTOR SHALL SECURE ALL CABLES, CONDUIT AND BOXES LOCATED ABOVE CEILING IN PLACE THAT ARE TO REMAIN OR TO BE REUSED AND FASTENED PER NEC.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ABANDONED SURFACE MOUNTED RACEWAY ON WALLS AND FLOORS.
3. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 E1.01D **Power Floor Plan - Area D**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

NORTH CAROLINA REGISTERED ARCHITECTURE SEAL 023311 W. ENGINEER ALLEN CRIBB
2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

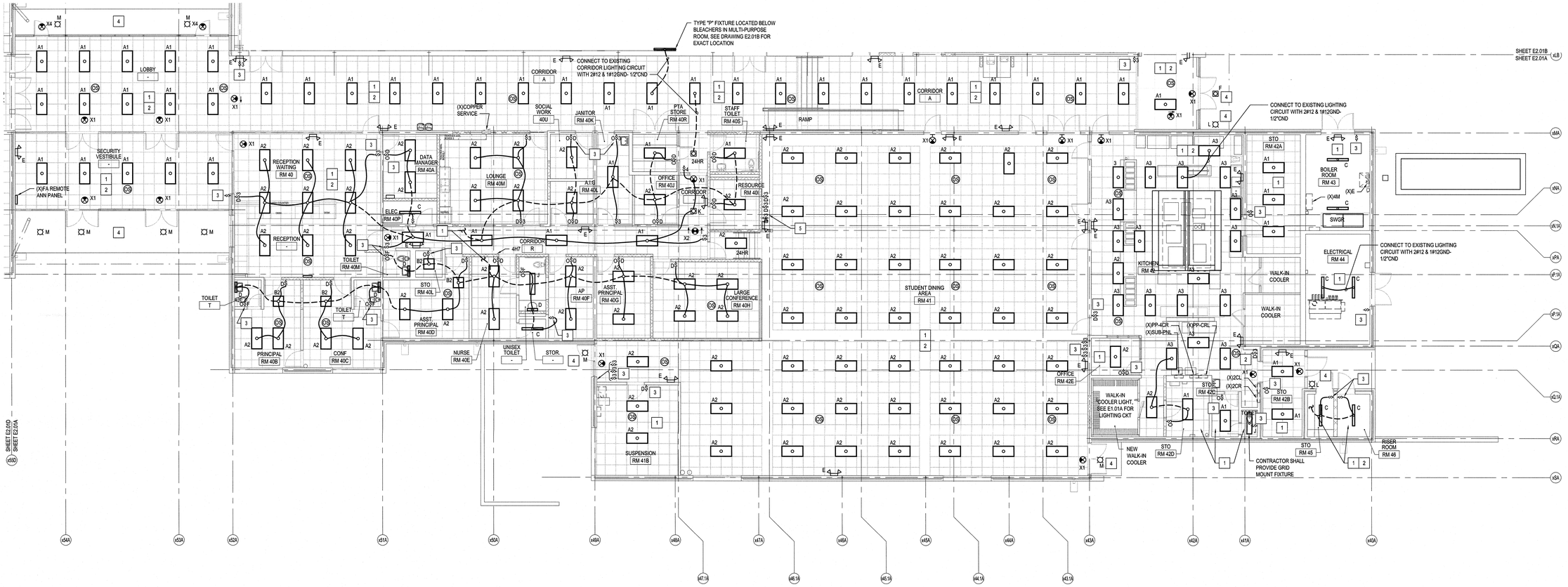
POWER FLOOR PLAN - AREA D

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E1.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

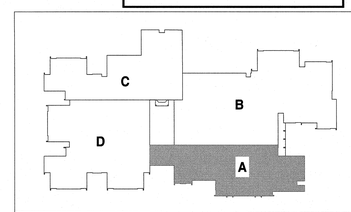


KEYED NOTES

1. INTERIOR LIGHTS: CONNECT FIXTURES TO EXISTING LIGHTING CIRCUIT UTILIZED PRIOR TO DEMOLITION IN EACH AREA.
2. POWER SUPPLY(S) AND OCC SENSOR(S): SEE DETAILS ON E.03 FOR CONNECTION DIAGRAMS. CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.
3. SWITCH: UTILIZE EXISTING CONDUIT AND FLUSH MOUNTED BOX FOR INSTALLATION OF LV SWITCH AND CABLE. SEE DETAILS ON E.03 FOR SWITCHING DIAGRAMS. CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.
4. EXTERIOR EGRESS LIGHT: CONNECT TO EXISTING LIGHTING CKT PROTECTED DURING DEMOLITION, PROVIDE 2#12 & 1#12GND EXISTING CONDUIT. PROVIDE 3/4" CONDUIT WHERE REQUIRED FOR NEW FIXTURES.
5. SWITCH BANK: CONNECT SWITCHES TO MATCH SWITCHING SCHEME PRIOR TO DEMOLITION.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / E2.01A **Existing Floor Plan - A**

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

0' 4' 8' 16'
1/8" = 1'-0"

STATE OF NORTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
SEAL 023311
ENGINEER W. ALLEN CBHF

2–4–19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL
LIGHTING FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E2.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF

2–4–19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL LIGHTING FLOOR PLAN - AREA B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E2.01B

SHEET E2.01C
SHEET E2.01B

CR RM 30 · CR RM 29 · CR RM 28 · GIRLS 2 · BOYS 2 · CORRIDOR K · CORRIDOR L · ART CR RM 21 · FAMILY & CONSUMER SCIENCE CR RM 22 · FAMILY & CONSUMER SCIENCE CR RM 23 · IT RM 22A · STO RM 22B · TOILET (M) RM 23B · TOILET (W) RM 23C · DRAMA ROOM RM 24 · CORRIDOR M · TOOLS RM 25B · STO RM 25C · TECH TODAY LAB RM 25 · OFFICE RM 25A · CUST RM 25D · CONTRACTOR SHALL PROVIDE GRID MOUNT FIXTURE

CONNECT TO EXISTING CORRIDOR LIGHTING CIRCUIT WITH 2#12 & 1#12GND- 1/2"CND

PROVIDE WIRE GUARD COVER

MOUNT 6' ABOVE TOP SEAT OF BLEACHERS AND PROVIDE WIRE GUARD COVER

MOUNT FIXTURE ON WALL CENTERED BETWEEN COLUMN AT 48"AFF (TYPICAL 4 LIGHTS THIS WALL)

NOTE: PROVIDE WIRE GUARD COVER FOR ALL SUSPENDED LIGHT FIXTURES IN MULTI-PURPOSE GYMNASIUM

MULTI-PURPOSE GYMNASIUM RM 38

NOBLE EAGLES

STO RM 38B · SHOWER · GIRL'S P.E. TOILET RM 56D · GIRL'S TOILET RM 54 · COACH OFFICE RM 56C · GIRL'S P.E. LOCKER RM 56 · GIRL'S TEAM LOCKER RM 56B · STORAGE RM 56A · STAGE RM 38A · STORAGE RM 52A · BOY'S TEAM LOCKER RM 52B · BOY'S P.E. LOCKER RM 52 · COACH OFFICE RM 52C · BOY'S P.E. TOILET RM 52D · BOY'S TOILET RM 55 · STORAGE RM 38C · LAUNDRY STOR. RM 57 · LAUNDRY RM 56 · CORRIDOR Q · CORRIDOR N · CORRIDOR O · CORRIDOR P · CORRIDOR I

NOTE: PROVIDE WIRE GUARD COVER FOR ALL SUSPENDED LIGHT FIXTURES OVER STAGE

SURFACE MOUNTED

CONNECT TO CORRIDOR LIGHTING CIRCUIT

OFFICE RM 27B · OFFICE RM 26D · INSTRUMENT STO. RM 29B · MUSIC LIBRARY RM 27A · STO RM 26C · BAND ROOM RM 26 · CHORAL ROOM RM 27 · OFFICE RM 26A · PRACTICE ROOM 2 · PRACTICE ROOM 1

CONNECT TO EXISTING CORRIDOR LIGHTING CIRCUIT WITH 2#12 & 1#12GND- 1/2"CND

SHEET E2.01B
SHEET E2.01A

KEYED NOTES

1. INTERIOR LIGHTS: CONNECT FIXTURES TO EXISTING LIGHTING CIRCUIT UTILIZED PRIOR TO DEMOLITION IN EACH AREA.
2. POWER SUPPLY(S) AND OCC SENSOR(S): SEE DETAILS ON E.03 FOR CONNECTION DIAGRAMS. CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.
3. SWITCH: UTILIZE EXISTING CONDUIT AND FLUSH MOUNTED BOX FOR INSTALLATION OF LV SWITCH AND CABLE. SEE DETAILS ON E.03 FOR SWITCHING DIAGRAMS. PROVIDE BLANK PLATE COVER ON BOXES NO LONGER IN USE OR NEEDED. CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.
4. EXTERIOR EGRESS LIGHT: CONNECT TO EXISTING LIGHTING CKT PROTECTED DURING DEMOLITION, PROVIDE 2#12 & 1#12GND EXISTING CONDUIT, PROVIDE 3/4" CONDUIT WHERE REQUIRED FOR NEW FIXTURES

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

TRUE PLAN NORTH

1 E2.01B **Existing Floor Plan - B**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

KEY PLAN
C · B · D · A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF

2-4-19

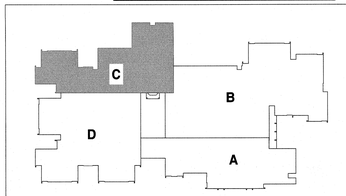


KEYED NOTES

1. INTERIOR LIGHTS: CONNECT FIXTURES TO EXISTING LIGHTING CIRCUIT UTILIZED PRIOR TO DEMOLITION IN EACH AREA.
2. POWER SUPPLY(S) AND OCC SENSOR(S): SEE DETAILS ON E.03 FOR CONNECTION DIAGRAMS. CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.
3. SWITCH: UTILIZE EXISTING CONDUIT AND FLUSH MOUNTED BOX FOR INSTALLATION OF LV SWITCH AND CABLE. SEE DETAILS ON E.03 FOR SWITCHING DIAGRAMS. CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.
4. EXTERIOR EGRESS LIGHT: CONNECT TO EXISTING LIGHTING CKT PROTECTED DURING DEMOLITION, PROVIDE 2#12 & 1#12GND EXISTING CONDUIT. PROVIDE 3/4" CONDUIT WHERE REQUIRED FOR NEW FIXTURES

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 E2.01C **Existing Floor Plan - C**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL LIGHTING FLOOR PLAN - AREA C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E2.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

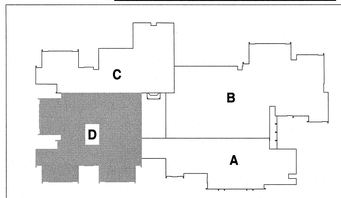


KEYED NOTES

1	INTERIOR LIGHTS: CONNECT FIXTURES TO EXISTING LIGHTING CIRCUIT UTILIZED PRIOR TO DEMOLITION IN EACH AREA.
2	POWER SUPPLY(S) AND OCC SENSOR(S): SEE DETAILS ON E.03 FOR CONNECTION DIAGRAMS. CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.
3	SWITCH: UTILIZE EXISTING CONDUIT AND FLUSH MOUNTED BOX FOR INSTALLATION OF LV SWITCH AND CABLE. SEE DETAILS ON E.03 FOR SWITCHING DIAGRAMS. CONTRACTOR SHALL PROVIDE A LABEL ON THE CEILING GRID T-BAR IDENTIFYING THE LOCATION ABOVE FOR LIGHTING CONTROL COMPONENTS. COORDINATE LABEL TYPE AND COLOR WITH ARCHITECT.
4	EXTERIOR EGRESS LIGHT: CONNECT TO EXISTING LIGHTING CKT PROTECTED DURING DEMOLITION, PROVIDE 2#12 & 1#12GND EXISTING CONDUIT. PROVIDE 3/4" CONDUIT WHERE REQUIRED FOR NEW FIXTURES

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / E2.01D **Existing Floor Plan - D**
scale: 1/8" = 1'-0"

0 4' 8' 16'
1/8" = 1'-0"

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 023311 WILLIAM ALLEN CRUMPLER
2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL LIGHTING FLOOR PLAN - AREA D

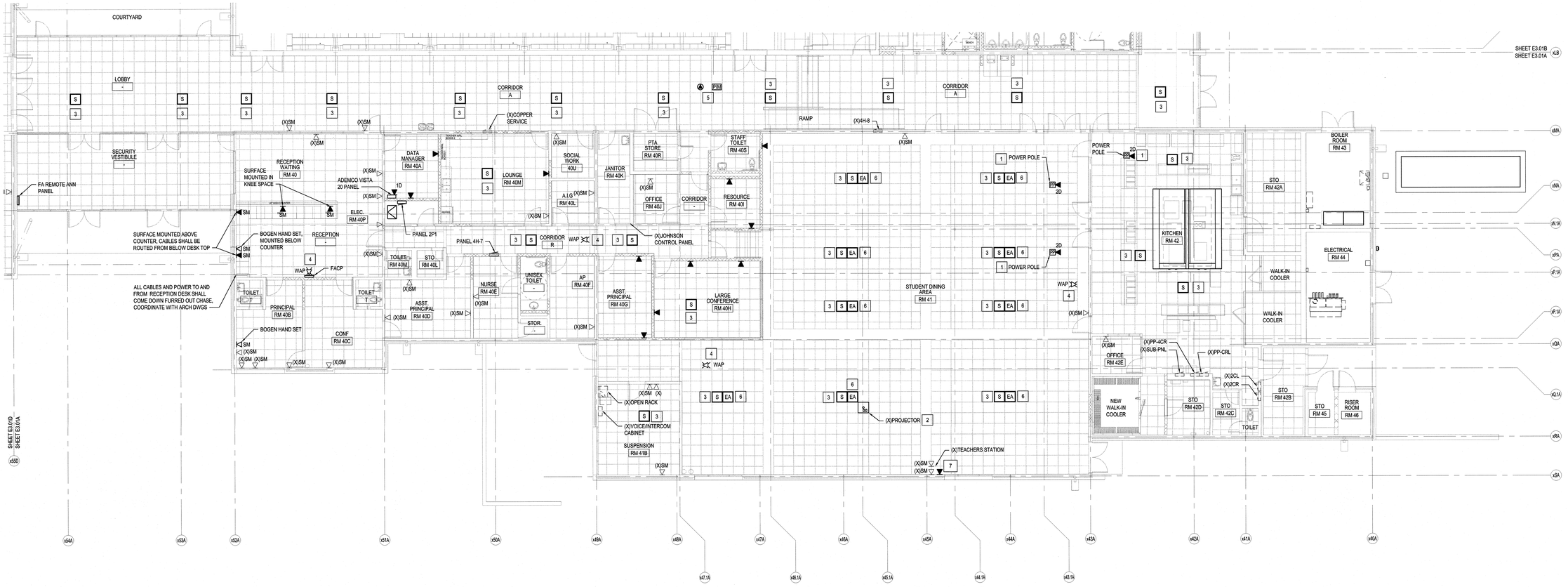
JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E2.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 023311 ENGINEER W. ALLEN CREWS
2–4–19



KEYED NOTES THIS SHEET ONLY

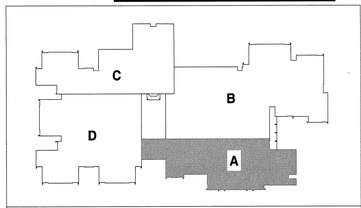
1. POWER POLE: UTILIZE DATA CABLES PROTECTED ABOVE CEILING DURING DEMOLITION TO FEED DATA DROPS IN POWER POLE.
2. PROJECTOR: QUALIFIED VENDOR SHALL INSTALL PROJECTOR PAN IN LOCATION INDICATED, REPLACE EXISTING EXTENSION TUBE WITH 6"-8" EXTENSION TUBE. MOUNT PROJECTOR REMOVED FROM CR 15 AND CONNECT EXISTING CABLES PROTECTED DURING DEMOLITION. COORDINATE AIMING AND FOCUS WITH NEW HANOVER COUNTY SCHOOLS AV DEPARTMENT.
3. CEILING MOUNTED GENERAL ANNOUNCEMENT SPEAKERS: MOUNT SPEAKERS REMOVED DURING DEMOLITION IN NEW CEILING GRID, RECONNECT SPEAKERS WITH SPEAKER CABLE PROTECTED DURING DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR SPEAKER OPERATING PROPERLY.
4. WAP: MOUNT WAP REMOVED DURING DEMOLITION IN NEW CEILING GRID, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF WAP.
5. CEILING MOUNTED PIM DEVICE (PIM): MOUNT PIM REMOVED DURING DEMOLITION IN NEW CEILING GRID, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF PIM.
6. EA SPEAKER (EA): MOUNT SPEAKER IN LOCATION INDICATED. PROVIDE AND CONNECT SPEAKER CABLE FROM (X)3.5MM JACK LOCATED IN SURFACE WALL BOX (EA) AT (X)TEACHERS STATION TO EA SPEAKER IN CEILING. POWER TO SPEAKER IS TO BE FED FROM RECEPTACLE MOUNTED IN PROJECTOR CEILING PAN.
7. PROVIDE (2)3.5MM MIC JACKS SURFACE MOUNTED ADJACENT TO TEACHERS OUTLETS.

NOTE

1. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.
2. CONTRACTOR IS RESPONSIBLE FOR UPDATING AND REPROGRAMMING ALL PHONES WITH NEW ROOM NUMBERS AND NAMES.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

PLAN NORTH
1 E3.01A Voice/Data Floor Plan - Area A
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

VOICE/DATA FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E3.01A

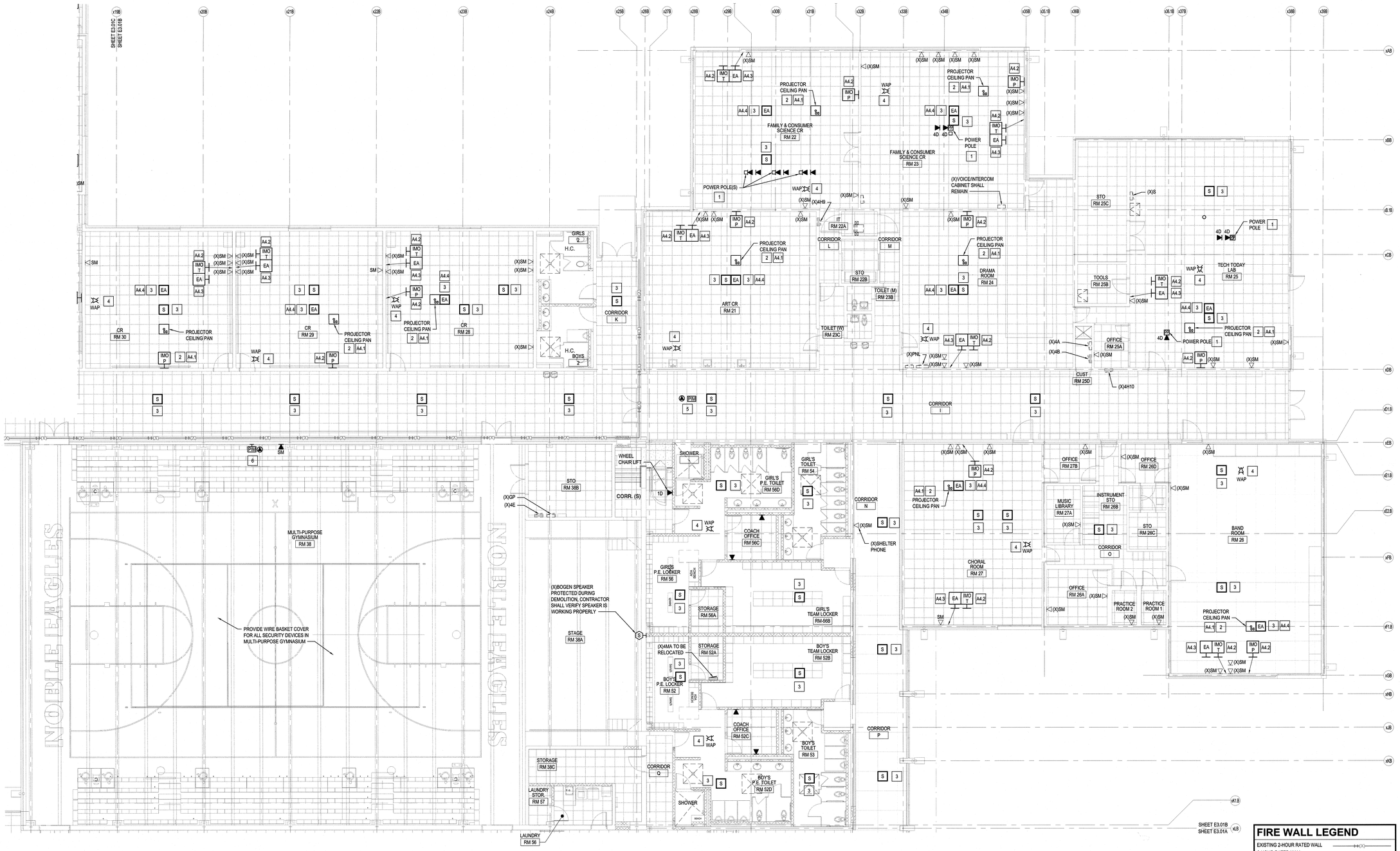
CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF
2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405



FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

KEYED NOTES THIS SHEET ONLY

1. POWER POLE: UTILIZE DATA CABLES PROTECTED ABOVE CEILING DURING DEMOLITION TO FEED DATA DROPS IN POWER POLE.
2. PROJECTOR: QUALIFIED VENDOR SHALL INSTALL PROJECTOR CEILING PAN PROTECTED DURING DEMOLITION AND CONSTRUCTION IN LOCATION INDICATED, MOUNT PROJECTOR REMOVED AND PROTECTED AND CONNECT EXISTING CABLES PROTECTED DURING DEMOLITION. COORDINATE AIMING AND FOCUS WITH NEW HANOVER COUNTY SCHOOLS AV DEPARTMENT.
3. CEILING MOUNTED GENERAL ANNOUNCEMENT SPEAKERS: MOUNT SPEAKERS REMOVED DURING DEMOLITION IN NEW CEILING GRID, RECONNECT SPEAKERS WITH SPEAKER CABLE PROTECTED DURING DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR SPEAKER OPERATING PROPERLY.
4. WAP: MOUNT WAP REMOVED DURING DEMOLITION IN NEW CEILING GRID, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF WAP.
5. CEILING MOUNTED PIM DEVICE (PIM): MOUNT PIM REMOVED DURING DEMOLITION IN NEW CEILING GRID, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF PIM.
6. WALL MOUNTED PIM DEVICE (PIM): MOUNT PIM REMOVED DURING DEMOLITION IN SAME LOCATION ON WALL, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF PIM.

ALTERNATE KEYED NOTES

- A4.1 PROJECTOR CEILING PAN: MOUNT PAN PROTECTED DURING DEMOLITION AND CONSTRUCTION IN LOCATION AS SHOWN, CONNECT RECEPTACLE LOCATED IN PAN TO EXISTING RECEPTACLE CKT. SEE DETAIL 4, SHEET E5.02.
- A4.2 TEACHERS STATION [IMO-T] AND INTERACTIVE PLAT PANEL DISPLAY [IMO-P]: PROVIDE (2)HDMI CABLES AND (1)USB CABLE FROM [IMO-T] SURFACE MOUNTED WALL BOX(S) VIA SURFACE RACEWAY TO INTERACTIVE FLAT PANEL DISPLAY [IMO-P] SURFACE MOUNTED WALL BOX(S). SEE DETAIL 4, SHEET E5.02.
- A4.3 EA CONNECTION [EA]: PROVIDE SURFACE MOUNTED WALL BOX [EA] WITH 3.5MM JACK AND SURFACE MOUNTED RACEWAY FOR CONNECTION UP TO CEILING MOUNTED EA SPEAKER. SEE DETAIL 4, SHEET E5.02.
- A4.4 EA CEILING SPEAKER [EA]: MOUNT SPEAKER IN LOCATION INDICATED. CONNECT SPEAKER CABLE FROM 3.5MM JACK LOCATED IN SURFACE WALL BOX [EA] AT TEACHERS STATION UP TO EA SPEAKER. POWER FOR EA SPEAKER SHALL BE FED FROM RECEPTACLE MOUNTED IN PROJECTOR CEILING PAN. SEE DETAIL 4, SHEET E5.02.

NOTE: IF ALTERNATE TAKEN TO INSTALL INTERACTIVE PLAT PANEL DISPLAY, PRIOR TO ANY ROUGH-IN AND INSTALLATION THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH NEW HANOVER COUNTY SCHOOLS AND GET APPROVAL FOR ALL FINAL LOCATIONS OF INTERACTIVE FLAT PANEL DISPLAYS AND TEACHER DESKS IN EACH CLASSROOM.

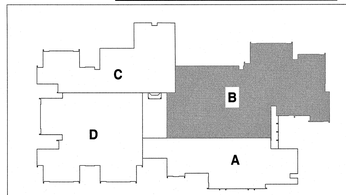
NOTE

1. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.
2. CONTRACTOR IS RESPONSIBLE FOR UPDATING AND REPROGRAMMING ALL PHONES WITH NEW ROOM NUMBERS AND NAMES.

TRUE PLAN NORTH

E3.01B — Voice/Data Floor Plan - Area B
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"



KEY PLAN

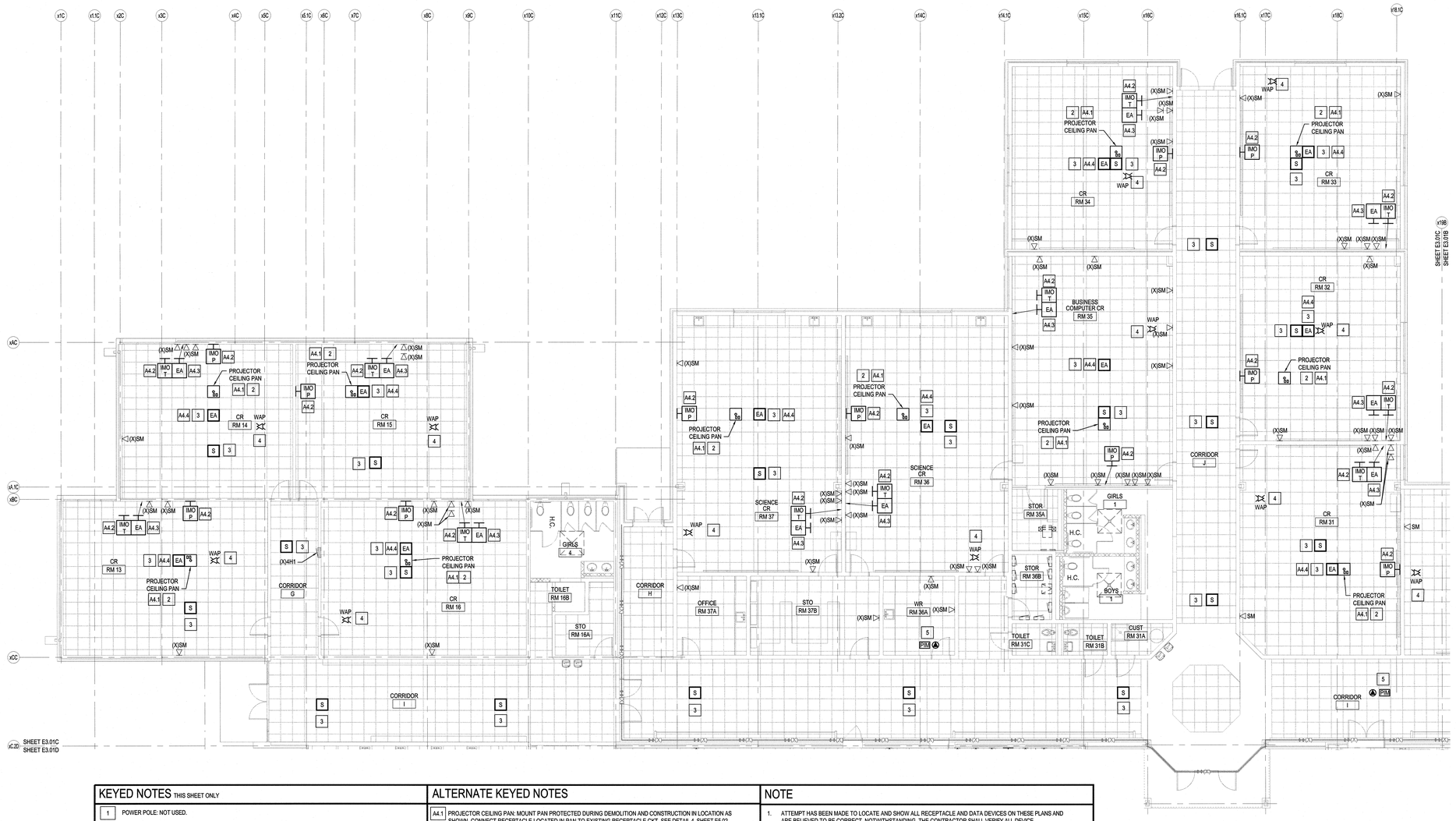
VOICE/DATA FLOOR PLAN - AREA B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E3.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



KEYED NOTES THIS SHEET ONLY

1. POWER POLE: NOT USED.
2. PROJECTOR: QUALIFIED VENDOR SHALL INSTALL PROJECTOR CEILING PAN PROTECTED DURING DEMOLITION AND CONSTRUCTION IN LOCATION INDICATED, MOUNT PROJECTOR REMOVED AND PROTECTED AND CONNECT EXISTING CABLES PROTECTED DURING DEMOLITION. COORDINATE AIMING AND FOCUS WITH NEW HANOVER COUNTY SCHOOLS AV DEPARTMENT.
3. CEILING MOUNTED GENERAL ANNOUNCEMENT SPEAKERS: MOUNT SPEAKERS REMOVED DURING DEMOLITION IN NEW CEILING GRID, RECONNECT SPEAKERS WITH SPEAKER CABLE PROTECTED DURING DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR SPEAKER OPERATING PROPERLY.
4. WAP: MOUNT WAP REMOVED DURING DEMOLITION IN NEW CEILING GRID, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF WAP.
5. CEILING MOUNTED PIM DEVICE (PIM): MOUNT PIM REMOVED DURING DEMOLITION IN NEW CEILING GRID, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF PIM.

ALTERNATE KEYED NOTES

- A4.1 PROJECTOR CEILING PAN: MOUNT PAN PROTECTED DURING DEMOLITION AND CONSTRUCTION IN LOCATION AS SHOWN, CONNECT RECEPTACLE LOCATED IN PAN TO EXISTING RECEPTACLE CKT. SEE DETAIL 4, SHEET E5.02.
- A4.2 TEACHERS STATION [IMO-T] AND INTERACTIVE FLAT PANEL DISPLAY [IMO-P]: PROVIDE (2)HDMI CABLES AND (1)USB CABLE FROM [IMO-T] SURFACE MOUNTED WALL BOX(S) VIA SURFACE RACEWAY TO INTERACTIVE FLAT PANEL DISPLAY [IMO-P] SURFACE MOUNTED WALL BOX(S). SEE DETAIL 4, SHEET E5.02.
- A4.3 EA CONNECTION [EA]: PROVIDE SURFACE MOUNTED WALL BOX [EA] WITH 3.5MM JACK AND SURFACE MOUNTED RACEWAY FOR CONNECTION UP TO CEILING MOUNTED EA SPEAKER. SEE DETAIL 4, SHEET E5.02.
- A4.4 EA CEILING SPEAKER [EA]: MOUNT SPEAKER IN LOCATION INDICATED. CONNECT SPEAKER CABLE FROM 3.5MM JACK LOCATED IN SURFACE WALL BOX [EA] AT TEACHERS STATION UP TO EA SPEAKER. POWER FOR EA SPEAKER SHALL BE FED FROM RECEPTACLE MOUNTED IN PROJECTOR CEILING PAN. SEE DETAIL 4, SHEET E5.02.

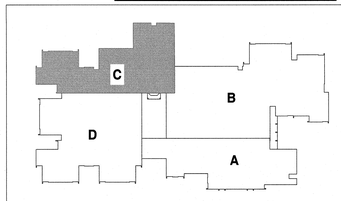
  NOTE: IF ALTERNATE TAKEN TO INSTALL INTERACTIVE PLAT PANEL DISPLAY, PRIOR TO ANY ROUGH-IN AND INSTALLATION THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH NEW HANOVER COUNTY SCHOOLS AND GET APPROVAL FOR ALL FINAL LOCATIONS OF INTERACTIVE FLAT PANEL DISPLAYS AND TEACHER DESKS IN EACH CLASSROOM.

NOTE

1. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.
2. CONTRACTOR IS RESPONSIBLE FOR UPDATING AND REPROGRAMMING ALL PHONES WITH NEW ROOM NUMBERS AND NAMES.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / E3.01C Voice/Data Floor Plan - Area C
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

VOICE/DATA FLOOR PLAN - AREA C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

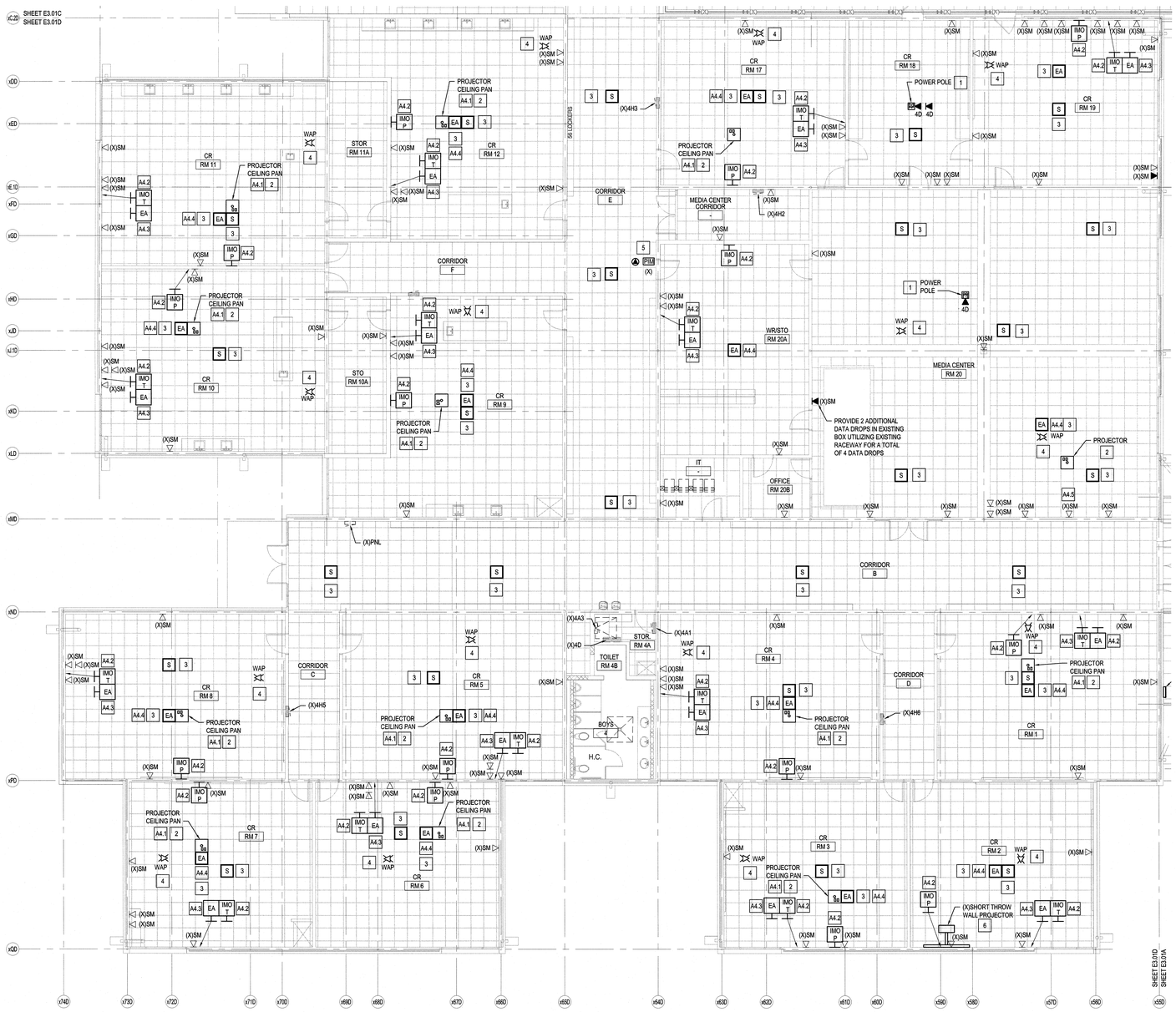
SHEET NUMBER E3.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF

2–4–19



KEYED NOTES THIS SHEET ONLY

1. POWER POLE: UTILIZE DATA CABLES PROTECTED ABOVE CEILING DURING DEMOLITION TO FEED DATA DROPS IN POWER POLE.
2. PROJECTOR: QUALIFIED VENDOR SHALL INSTALL PROJECTOR PAN PROTECTED DURING DEMOLITION AND CONSTRUCTION IN LOCATION INDICATED, MOUNT PROJECTOR REMOVED AND PROTECTED AND CONNECT EXISTING CABLES PROTECTED DURING DEMOLITION. COORDINATE AIMING AND FOCUS WITH NEW HANOVER COUNTY SCHOOLS AV DEPARTMENT.
3. CEILING MOUNTED GENERAL ANNOUNCEMENT SPEAKERS: MOUNT SPEAKERS REMOVED DURING DEMOLITION IN NEW CEILING GRID. RECONNECT SPEAKERS WITH SPEAKER CABLE PROTECTED DURING DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR SPEAKER OPERATING PROPERLY.
4. WAP: MOUNT WAP REMOVED DURING DEMOLITION IN NEW CEILING GRID, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF WAP.
5. CEILING MOUNTED PIM DEVICE (PIM): MOUNT PIM REMOVED DURING DEMOLITION IN NEW CEILING GRID, UTILIZE EXISTING DATA CABLES PROTECTED DURING DEMOLITION FOR CONNECTION OF PIM.
6. SHORT THROW WALL PROJECTOR: QUALIFIED VENDOR SHALL INSTALL SHORT THROW WALL PROJECTOR IN LOCATION INDICATED, MOUNT PROJECTOR REMOVED AND PROTECTED AND CONNECT EXISTING CABLES PROTECTED DURING DEMOLITION. COORDINATE AIMING AND FOCUS WITH NEW HANOVER COUNTY SCHOOLS AV DEPARTMENT.

ALTERNATE KEYED NOTES

- A4.1 PROJECTOR CEILING PAN: MOUNT PAN PROTECTED DURING DEMOLITION AND CONSTRUCTION IN LOCATION AS SHOWN, CONNECT RECEPTACLE LOCATED IN PAN TO EXISTING RECEPTACLE CKT. SEE DETAIL 4, SHEET E5.02.
- A4.2 TEACHERS STATION [IMO-T] AND INTERACTIVE FLAT PANEL DISPLAY [IMO-P]: PROVIDE (2)HDMI CABLES AND (1)USB CABLE FROM [IMO-T] SURFACE MOUNTED WALL BOX(S) VIA SURFACE RACEWAY TO INTERACTIVE FLAT PANEL DISPLAY [IMO-P] SURFACE MOUNTED WALL BOX(S). SEE DETAIL 4, SHEET E5.02.
- A4.3 EA CONNECTION [EA]: PROVIDE SURFACE MOUNTED WALL BOX [EA] WITH 3.5MM JACK AND SURFACE MOUNTED RACEWAY FOR CONNECTION UP TO CEILING MOUNTED EA SPEAKER. SEE DETAIL 4, SHEET E5.02.
- A4.4 EA CEILING SPEAKER [EA]: MOUNT SPEAKER IN LOCATION INDICATED. CONNECT SPEAKER CABLE FROM 3.5MM JACK LOCATED IN SURFACE WALL BOX [EA] AT TEACHERS STATION UP TO EA SPEAKER. POWER FOR EA SPEAKER SHALL BE FED FROM RECEPTACLE MOUNTED IN PROJECTOR CEILING PAN. SEE DETAIL 4, SHEET E5.02.
- A4.5 PROJECTOR: PROJECTOR CEILING PAN SHALL BE LOCATED AS SHOWN, CONNECT CABLES FROM TEACHERS STATION REMOVED AND PROTECTED DURING DEMOLITION .

  NOTE: IF ALTERNATE TAKEN TO INSTALL INTERACTIVE FLAT PANEL DISPLAY, PRIOR TO ANY ROUGH-IN AND INSTALLATION THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH NEW HANOVER COUNTY SCHOOLS AND GET APPROVAL FOR ALL FINAL LOCATIONS OF INTERACTIVE FLAT PANEL DISPLAYS AND TEACHER DESKS IN EACH CLASSROOM.

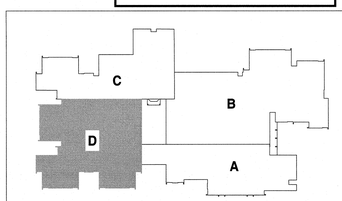
NOTE

1. ATTEMPT HAS BEEN MADE TO LOCATE AND SHOW ALL RECEPTACLE AND DATA DEVICES ON THESE PLANS AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DEVICE LOCATIONS, CIRCUITS, AND WIRING ASSOCIATED WITH WORK FOR THIS PROJECT AND REPLACE ALL DEVICES EVEN IF NOT INDICATED ON PLANS.
2. CONTRACTOR IS RESPONSIBLE FOR UPDATING AND REPROGRAMMING ALL PHONES WITH NEW ROOM NUMBERS AND NAMES.

FIRE WALL LEGEND
EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

TRUE PLAN NORTH

1 E3.01D **Voice/Data Floor Plan - Area D**
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"



KEY PLAN

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

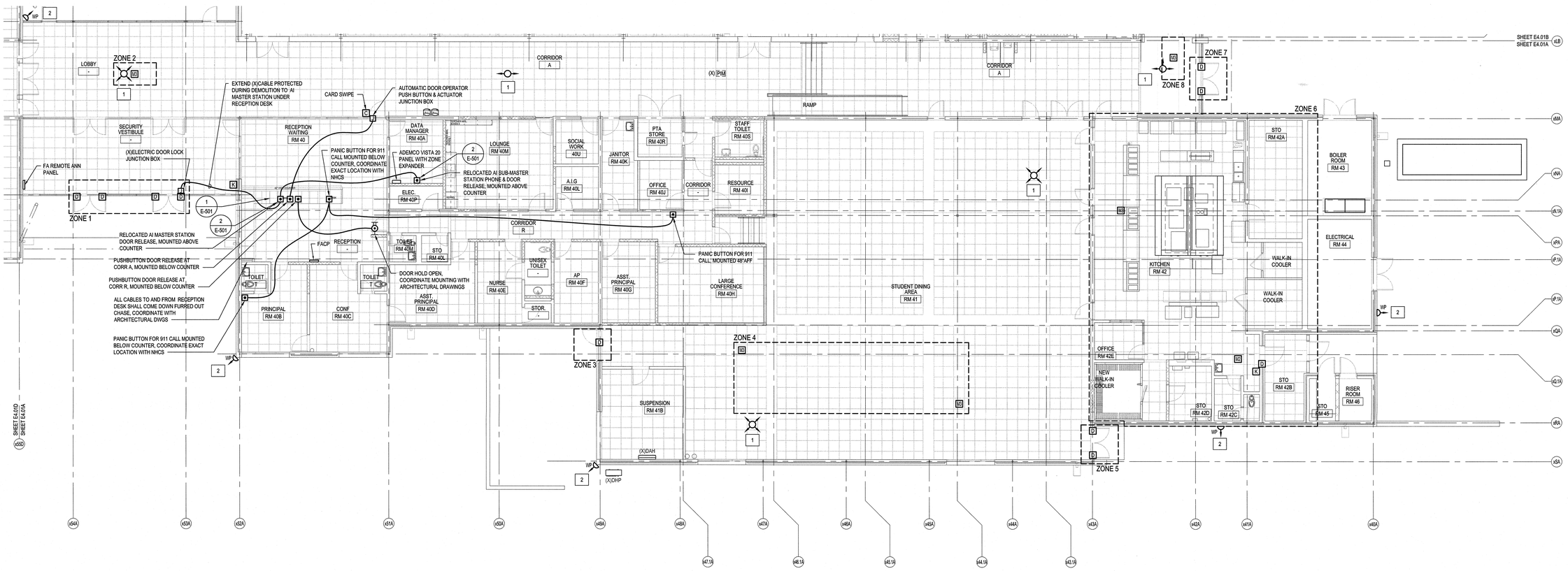
VOICE.DATA FLOOR PLAN - AREA D

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E3.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

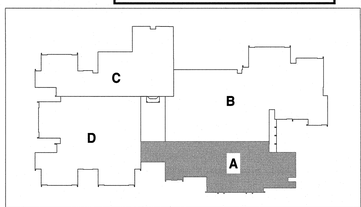


KEYED NOTES THIS SHEET ONLY

1	WALL/CEILING MOUNTED CAMERAS: CAMERA SHALL BE RE-INSTALLED IN ROOM PER LABEL ON CAMERA AND MOUNTED IN SAME LOCATION INSTALLED PRIOR TO DEMOLITION. RECONNECT TO EXISTING CABLE AND CONDUIT PROTECTED DURING DEMOLITION.
2	EXTERIOR CAMERAS: CONTRACTOR SHALL VERIFY CAMERA IS OPERATIONAL.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / E4.01A Systems Floor Plan - A
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

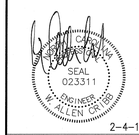
SYSTEMS FLOOR PLAN - AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E4.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



2–4–19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405



KEYED NOTES THIS SHEET ONLY

1. WALL/CEILING MOUNTED CAMERAS: CAMERA SHALL BE RE-INSTALLED IN ROOM PER LABEL ON CAMERA AND MOUNTED IN SAME LOCATION INSTALLED PRIOR TO DEMOLITION. RECONNECT TO EXISTING CABLE AND CONDUIT PROTECTED DURING DEMOLITION.
2. EXTERIOR CAMERAS: CONTRACTOR SHALL VERIFY CAMERA IS OPERATIONAL.

ALTERNATE KEYED NOTE

A2 MOBILE UNITS: ALL SYSTEMS SECURITY INFRASTRUCTURE SHALL BE INCLUDED IN ALTERNATE #2.

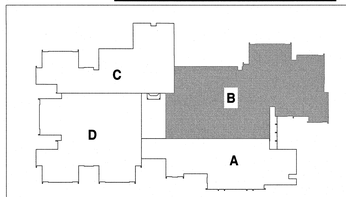
FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

TRUE PLAN NORTH

1 E4.01B **Systems Floor Plan - B**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"



KEY PLAN

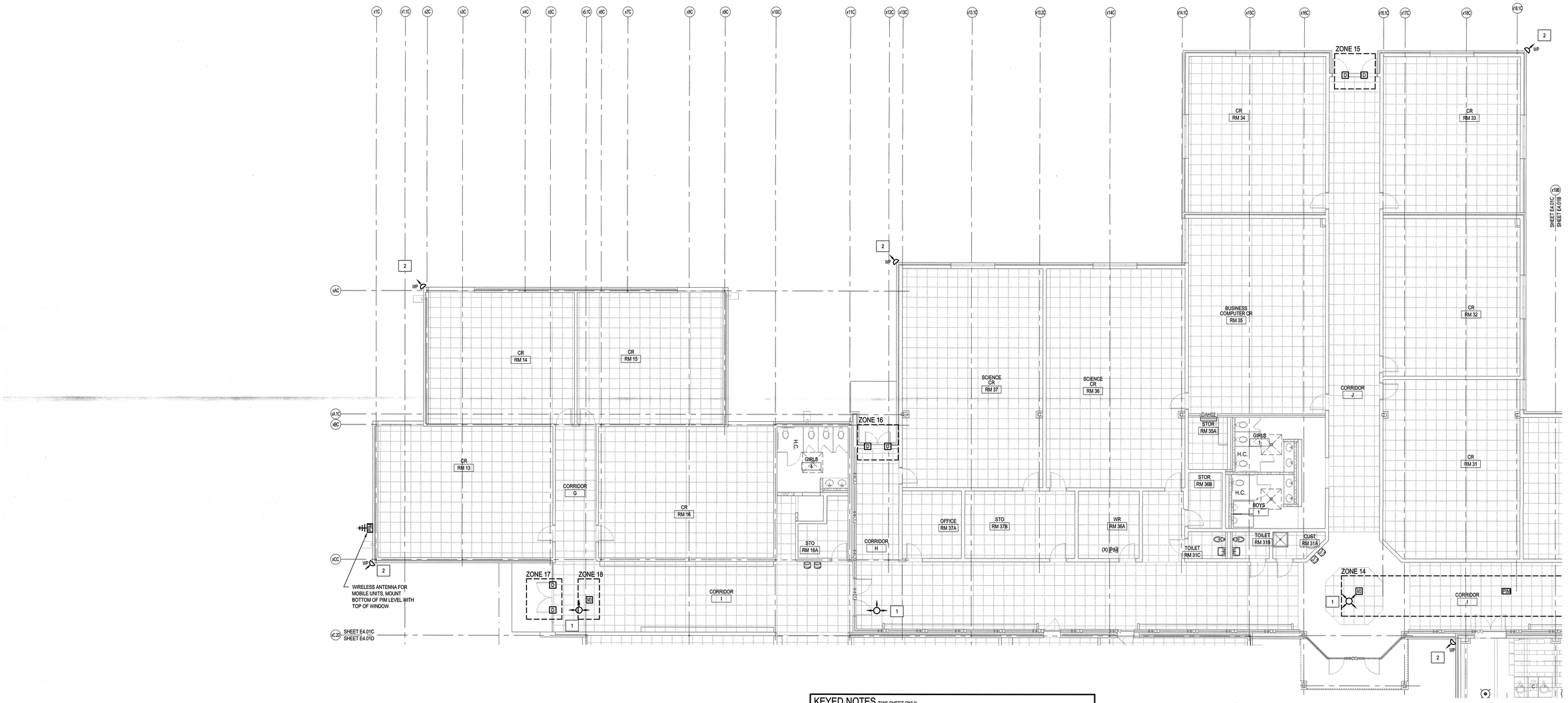
SYSTEMS FLOOR PLAN - AREA B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E4.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

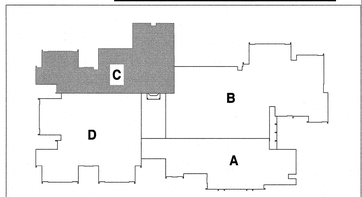


KEYED NOTES THIS SHEET ONLY

1. WALL/CEILING MOUNTED CAMERAS: CAMERA SHALL BE RE-INSTALLED IN ROOM PER LABEL ON CAMERA AND MOUNTED IN SAME LOCATION INSTALLED PRIOR TO DEMOLITION. RECONNECT TO EXISTING CABLE AND CONDUIT PROTECTED DURING DEMOLITION.
2. EXTERIOR CAMERAS: CONTRACTOR SHALL VERIFY CAMERA IS OPERATIONAL.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / E4.01C **Systems Floor Plan - C**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

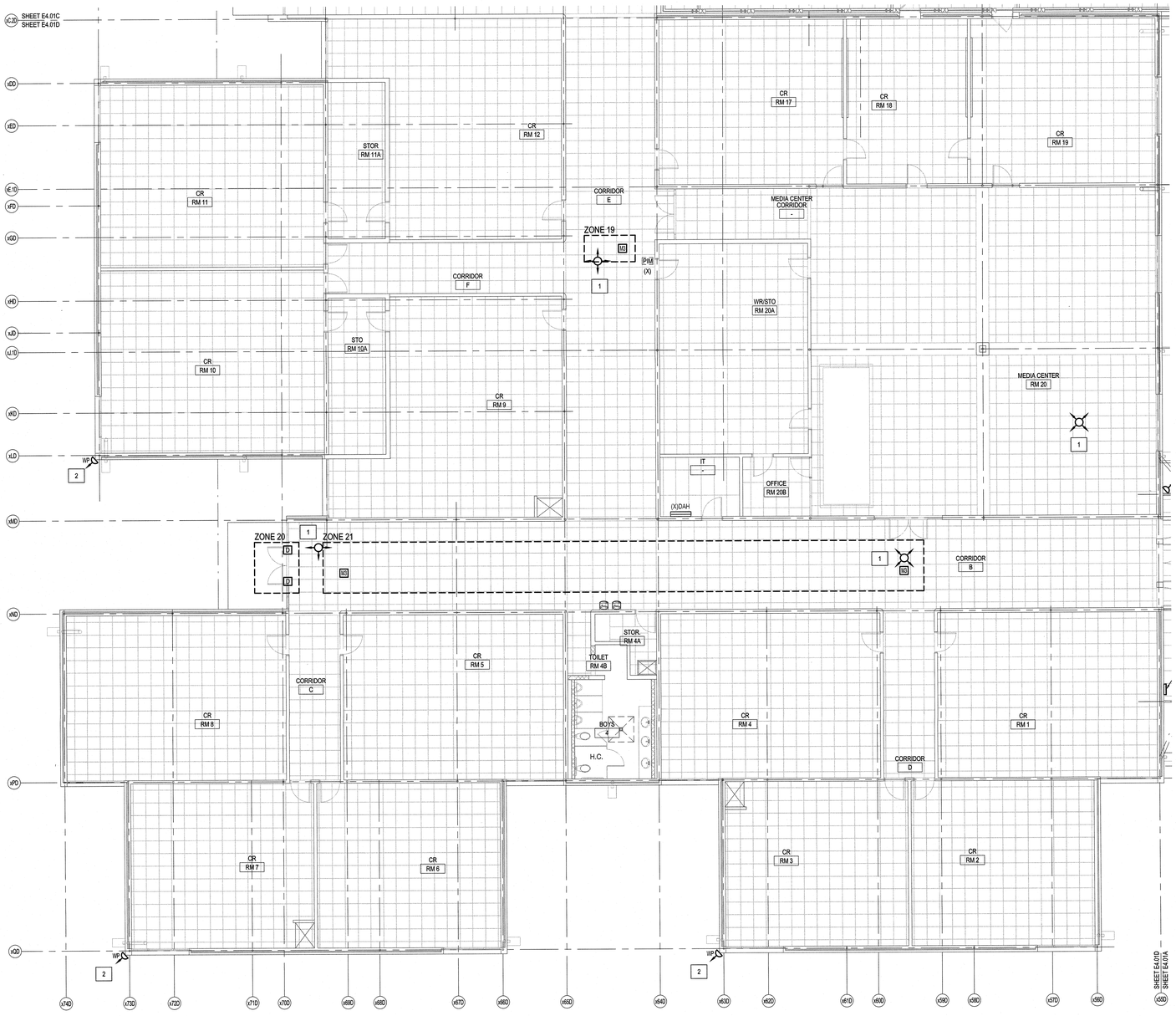
SYSTEMS FLOOR PLAN - AREA C

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E4.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

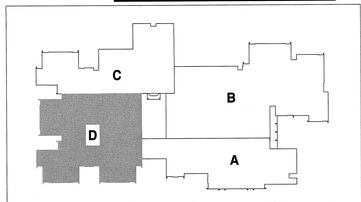


KEYED NOTES THIS SHEET ONLY

1. WALL/CEILING MOUNTED CAMERAS: CAMERA SHALL BE RE-INSTALLED IN ROOM PER LABEL ON CAMERA AND MOUNTED IN SAME LOCATION INSTALLED PRIOR TO DEMOLITION. RECONNECT TO EXISTING CABLE AND CONDUIT PROTECTED DURING DEMOLITION.
2. EXTERIOR CAMERAS: CONTRACTOR SHALL VERIFY CAMERA IS OPERATIONAL.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / E4.01D **Systems Floor Plan - D**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

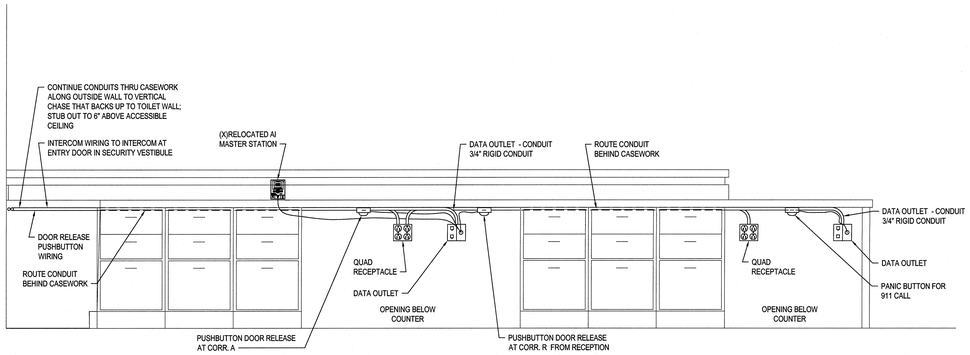
Renovations to:
M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

SYSTEMS FLOOR PLAN - AREA D

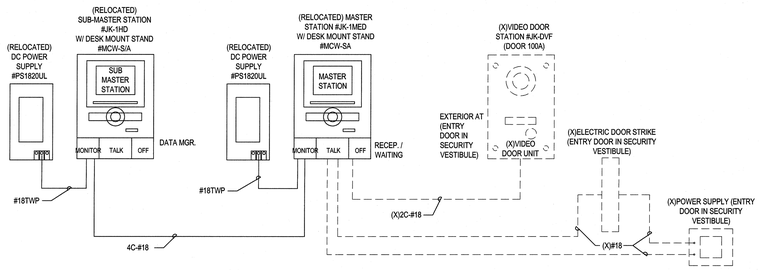
JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER E4.01D

2-4-19

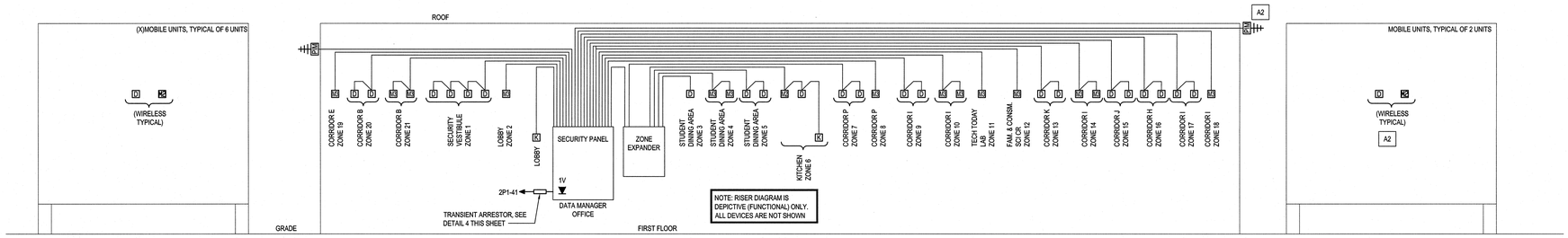


1 E5.01 **Reception Desk Electrical Detail**
Not To Scale



NOTE:
BASIS OF DESIGN IS AIPHONE J SERIES.

2 E5.01 **Video Intercom System Riser**
Not To Scale

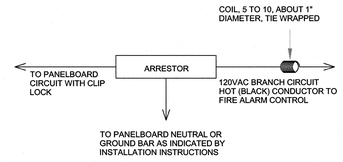


NOTE: RISER DIAGRAM IS DEPICTIVE (FUNCTIONAL) ONLY. ALL DEVICES ARE NOT SHOWN

3 E5.01 **Security Riser Diagram**
Not To Scale

ALTERNATE KEYED NOTE

A2	MOBILE UNITS: ALL SYSTEMS SECURITY INFRASTRUCTURE SHALL BE INCLUDED IN ALTERNATE #2.



NOTES:
SECURELY MOUNT TRANSIENT ARRESTOR IN ACCESSIBLE JUNCTION BOX OR PROPER METAL ENCLOSURE ADJACENT TO THE PANELBOARD. PROVIDE ENGRAVED LABEL INDICATING ITS LOCATION

4 E5.01 **Transient Arrestor Installation Detail**
Not To Scale

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506

© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506



2–4–19

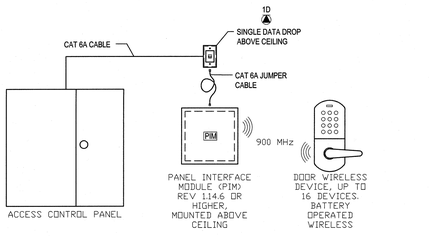
Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL RISER DIAGRAMS

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER
E5.01



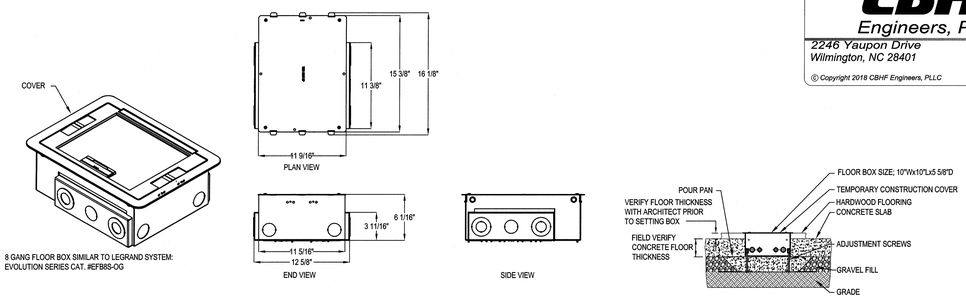
PIM400–1501	16 door intelligent controller
Modulation / encryption	900 MHz spread spectrum, direct sequence, 10 channels, AES–128 bit key
Frequency range	902–928 MHz
Credential verification time	< 1 second
Communication range	§Up to 200 ft (61 m) indoor range, with normal building obstructions §Up to 1000 ft (305 m) clear line of sight §Up to 2000 ft (609 m) line of sight with high gain antenna on PIM400 §Up to 4000 ft (1219 m) line of sight with high gain antennas on PIM400 –1501 and WRI400.
RF interference avoidance	Configurable Dynamic Channel Switching
Operating temperature	32° F to 151° F, 0° C to 66° C
Humidity	10% to 95% relative humidity non-condensing
Power input	PoE, 12.95W compliant to IEEE 802.3af or 12VDC +– 10% 400mA max power supply
Communication to host	10 Base–T / 100Base–TX
Intelligent controller memory	240,000 cardholders, 50,000 transaction buffer 32 Access levels per cardholder Activation/deactivation dates
Dimensions	10.43" X 7.28" X 3.79" (26.49cm X 18.49 cm X 9.63 cm)
Weight	2.8 lbs.
Certifications	FCC Part 15, Industry Canada(IC), RoHS UL294 Listed when connected to UL294 power supply
Optional accessories	Handheld Device (HHD), AD Series wireless locks (AD–400), Wireless Portable Readers (WPR400), Wireless Reader Interfaces (WRI400)

[1] LOCK REQUIRES LESS THAN 100 MSEC, RESPONSE TIME DOES NOT INCLUDE LATENCY TIME OF ACP

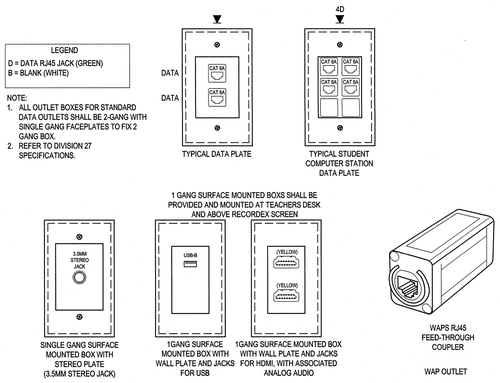
[2] CONFIRM WITH YOUR ACCESS CONTROL SOFTWARE PROVIDER

ALLEGION, THE ALLEGION LOGO, SCHLAGE, AND THE SCHLAGE LOGO ARE TRADEMARKS OF ALLEGION PLC, ITS SUBSIDIARIES AND/OR AFFILIATES IN THE UNITED STATES AND OTHER COUNTRIES. ALL OTHER TRADEMARKS ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS.

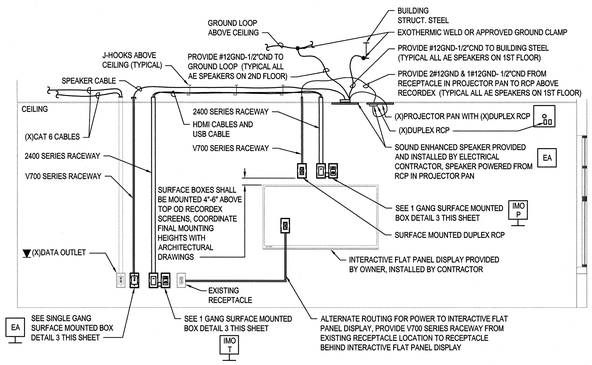
1 / E5.02 **Panel Interface Module (PIM) Wiring Diagram (Typical)**
Not To Scale



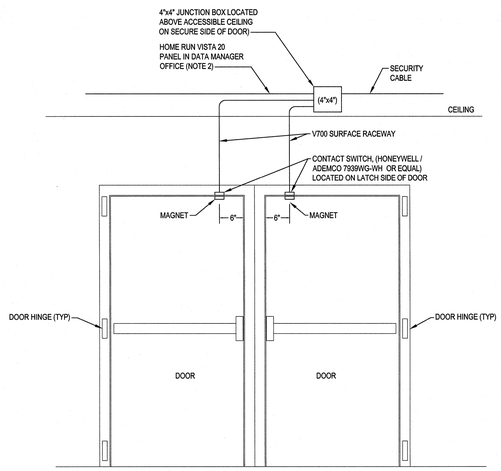
2 / E5.02 **Floor Box Detail**
Not To Scale



3 / E5.02 **Typical Wall Plate Details**
Not to Scale



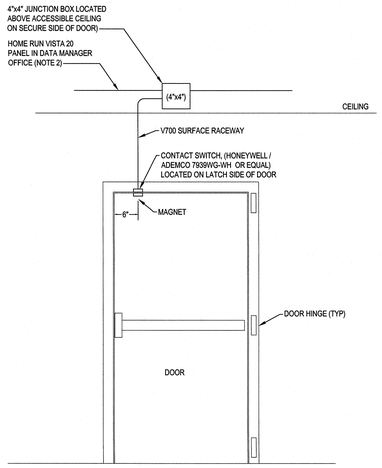
4 / E5.02 **Typical Wall Mounted Recordex Wall Plate Detail**
SCALE: NONE



NOTES:

1. COORDINATE THE EXACT LOCATION OF SECURITY DEVICES, CONDUIT, AND JUNCTION BOXES WITH THE ARCHITECT, ENGINEER, AND SECURITY.
2. CONDUIT IS ONLY NECESSARY WHERE PLENUM CABLE IS NOT ACCEPTABLE. JUNCTION BOXES MAY STILL BE REQUIRED.
3. PROVIDE JUNCTION BOX, AS SHOWN, FLUSH OR SURFACE MOUNTED ABOVE DOOR, OR ABOVE CEILING WHERE APPLICABLE ON SECURE SIDE.
4. ROUTE SURFACE RACEWAY DOWN WALL TO TOP OF DOOR FRAME FOR SURFACE CONTACT, COORDINATE POSITION OF SURFACE MAGNET AND SWITCH WITH SECURITY CONTRACTOR.
5. PULL STRING PROVIDED IN CONDUIT.

5 / E5.02 **Security Door Detail (Double Typical)**
Not to Scale



NOTES:

1. COORDINATE THE EXACT LOCATION OF SECURITY DEVICES, CONDUIT, AND JUNCTION BOXES WITH THE ARCHITECT, ENGINEER, AND SECURITY.
2. CONDUIT IS ONLY NECESSARY WHERE PLENUM CABLE IS NOT ACCEPTABLE. JUNCTION BOXES MAY STILL BE REQUIRED.
3. PROVIDE JUNCTION BOX, AS SHOWN, FLUSH OR SURFACE MOUNTED ABOVE DOOR, OR ABOVE CEILING WHERE APPLICABLE ON SECURE SIDE.
4. ROUTE SURFACE RACEWAY DOWN TO TOP OF DOOR FRAME FOR SURFACE MAGNETIC, COORDINATE POSITION OF SURFACE MAGNET AND SWITCH WITH SECURITY CONTRACTOR.
5. PULL STRING PROVIDED IN CONDUIT.

6 / E5.02 **Security Door Detail (Single Typical)**
Not to Scale

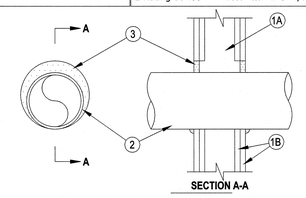
Fire Stop Systems:

1. SUBSTITUTION OF MATERIALS, ITEMS OR EQUIPMENT OF EQUAL OR EQUIVALENT DESIGN SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER FOR APPROVAL OR DISAPPROVAL. SUCH APPROVAL OR DISAPPROVAL SHALL BE MADE BY THE ARCHITECT OR ENGINEER PRIOR TO THE OPENING OF BIDS.

System No. W-L-1054

October 14, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings —1 and 2 Hr (See Items 1 and 3)	F Ratings — 1 and 2 Hr (See Items 1 and 3)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating at Ambient — Less Than 1 CFM/sq ft	FH Ratings —1 and 2 Hr (See Items 1 and 3)
L Rating at 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	FTH Rating — 0 Hr L Rating at Ambient — Less Than 1 CFM/sq ft
	L Rating at 400 F — Less Than 1 CFM/sq ft



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four sides.

B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. (819 mm) for steel stud walls. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls.

The F and FH Ratings of the firestop system are equal to the fire rating of the wall assembly.

2. Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. (57 mm). Pipe may be installed with continuous point contact. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.

C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm) . diam steel conduit.

D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) regular (or heavier) copper pipe.

3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

7 / E5.02 **1 and 2 Hour Firewall Penetration Detail**
Not To Scale

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

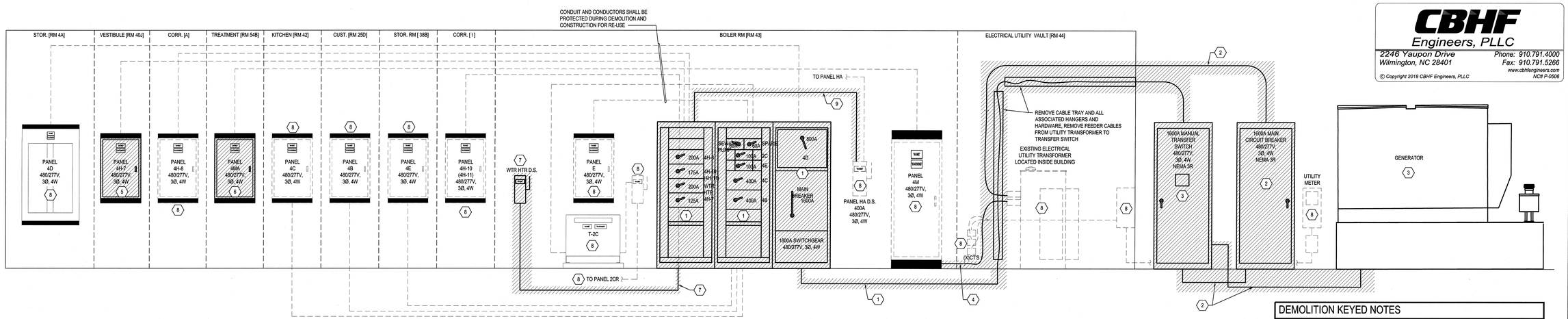
SEAL 023311 ENGINEER WILLIAM A. ALLEN, JR.
2–4–19

Renovations to:
M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL DETAILS

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

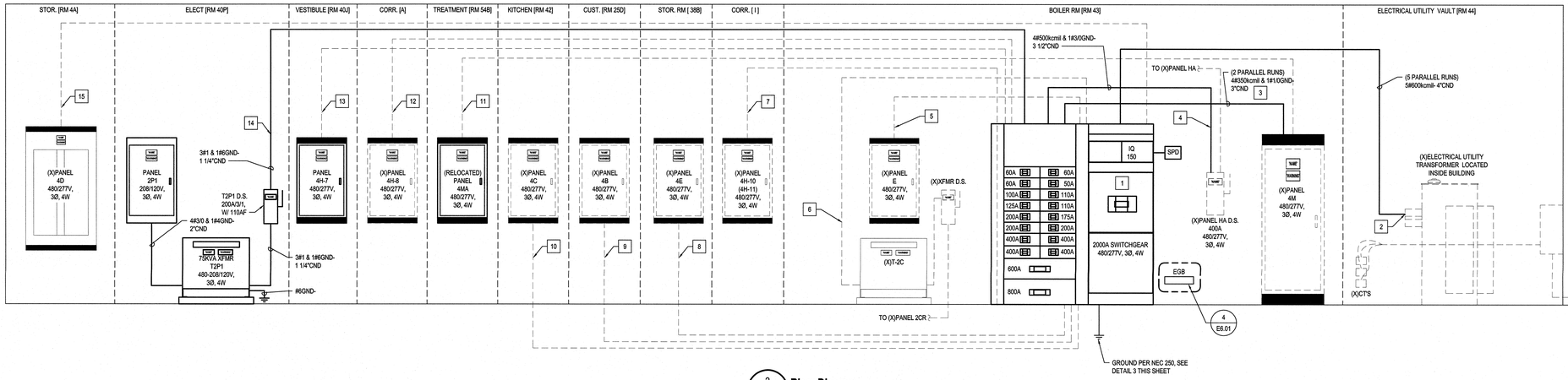
SHEET NUMBER
E5.02



1 **Riser Diagram - Demolition**
E6.01 Not To Scale

DEMOLITION KEYED NOTES

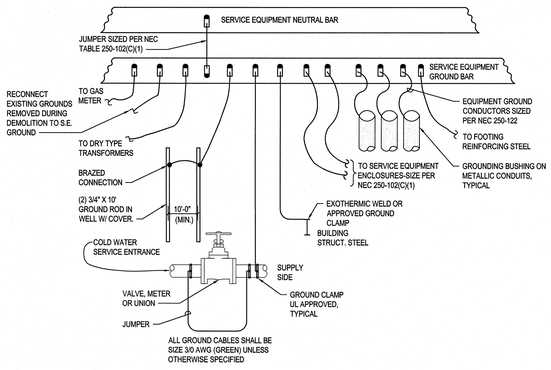
1. MAIN SWGR: REMOVE MAIN SWGR, REMOVE CONDUIT AND CONDUCTORS FROM UTILITY, LABEL ALL BRANCH CIRCUITS PRIOR TO DISCONNECTION FROM MAIN SWGR AND PROTECT IN PLACE UNLESS LOAD IS SPECIFICALLY NOTED ON PLAN TO BE REMOVED. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER THE REMOVAL OF BREAKERS PRIOR TO DEMOLITION, ELECTRICAL CONTRACTOR SHALL DELIVER BREAKERS TO OWNER SELECTED TO BE SALVAGED.
2. MAIN CIRCUIT BREAKER: REMOVE CIRCUIT BREAKER, CONDUIT AND CONDUCTORS COMPLETE FROM UTILITY TO MANUAL TRANSFER SWITCH. CONCEALED/UNDERGROUND CONDUIT SHALL REMAIN ABANDONED IN PLACE.
3. GENERATOR AND MTS: GENERATOR AND MTS IS THE PROPERTY OF NEW HANOVER COUNTY. PROTECT GENERATOR IN PLACE, REMOVE MTS AND DELIVER TO NEW HANOVER COUNTY SCHOOLS FOR STORAGE, NEW HANOVER COUNTY SCHOOLS WILL DELIVER TO NEW HANOVER COUNTY AT A LATER DATE.
4. PANELBOARD: REMOVE CONDUIT AND CONDUCTORS COMPLETE FROM UTILITY TO CIRCUIT BREAKER. CONDUIT AND CONDUCTORS FROM CIRCUIT BREAKER TO MAIN SWGR SHALL REMAIN PROTECTED IN PLACE.
5. FLUSH PANELBOARD: REMOVE PANELBOARD. LABEL ALL BRANCH CIRCUITS PRIOR TO DISCONNECTION FROM PANEL AND PROTECT IN PLACE UNLESS LOAD IS SPECIFICALLY NOTED ON PLAN TO BE REMOVED. BRANCH CIRCUIT CONDUCTORS SHALL BE RECONNECTED TO NEW PANEL LOCATION.
6. SURFACE PANELBOARD: REMOVE AND PROTECT PANEL FOR RELOCATION. LABEL ALL BRANCH CIRCUITS PRIOR TO DISCONNECTION FROM PANEL AND PROTECT IN PLACE UNLESS LOAD IS SPECIFICALLY NOTED ON PLAN TO BE REMOVED. PANELBOARD FEEDERS AND BRANCH CIRCUITS SHALL BE EXTENDED TO NEW PANEL LOCATION.
7. WATER HEATER: REMOVE DISCONNECT, REMOVE CONDUIT AND CONDUCTORS COMPLETE FROM WATER HEATER TO SOURCE, CONDUIT BELOW SLAB SHALL REMAIN ABANDONED IN PLACE.
8. EQUIPMENT: EQUIPMENT SHALL BE PROTECTED IN PLACE AND BE OPERATIONAL AFTER DEMOLITION AND CONSTRUCTION.
9. PANEL HA D.S.: REMOVE CONDUIT AND CONDUCTORS COMPLETE FROM DISCONNECT TO SWGR.



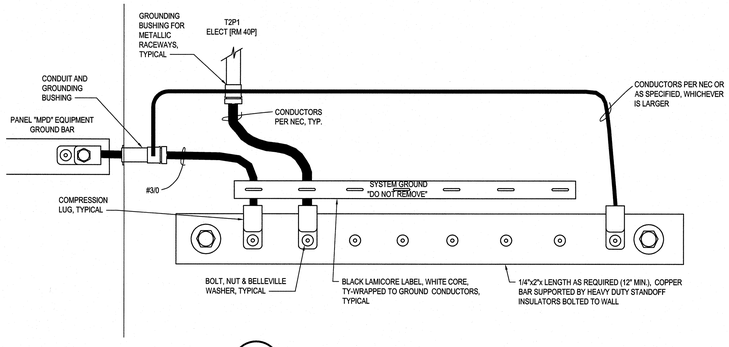
2 **Riser Diagram**
E6.01 Not To Scale

KEYED NOTES

1. MAIN SWGR: POSITION SWGR OVER EXISTING CONDUITS COMING UP THRU SLAB.
2. PRIMARY FEEDER CONDUCTORS: PROVIDE AND INSTALL CONDUIT AND CONDUCTORS INDICATED, CONNECT TO EXISTING UTILITY TRANSFORMER AND TO MAIN SWGR. PER DUKE COORDINATION AND DIRECTION.
3. (X)PANEL 4M: PROVIDE AND INSTALL CONDUIT AND CONDUCTORS INDICATED, CONNECT TO MAIN SWGR.
4. (X)PANEL HA D.S.: PROVIDE AND INSTALL CONDUIT AND CONDUCTORS INDICATED..
5. (X)PANEL E: RECONNECT #3 CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.
6. (X)PANEL 2C: RECONNECT #3 CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.
7. (X)PANEL 4H-10 (4H-11): RECONNECT #2/0 CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.
8. (X)PANEL E: RECONNECT #3 CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.
9. (X)PANEL 4B: RECONNECT (X)#500kcmil CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.
10. (X)PANEL 4C: RECONNECT (X)#500kcmil CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.
11. (X)PANEL 4MA: REWORK EXISTING CONDUIT AND CONDUCTORS TO ROUTE TO NEW LOCATION OF PANEL 4MA, SEE PLAN ON SHEET E1.01B.
12. (X)PANEL 4H-8: RECONNECT (X)3/0 CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.
13. (X)PANEL 4H-7: RECONNECT (X)CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.
14. PANEL 2P1: PROVIDE AND INSTALL CONDUIT AND CONDUCTORS INDICATED, CONNECT TO MAIN SWGR.
15. (X)PANEL 4D: RECONNECT (X)PARALLEL RUNS OF #500kcmil CONDUCTORS AND CONDUIT REMOVED AND PROTECTED DURING DEMOLITION. REWORK CONDUIT AS REQUIRED TO CONNECT TO SWGR.



3 **Service Grounding Detail**
E6.01 Not To Scale



4 **Ground Bar "EGB" Detail**
E6.01 Not To Scale

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER WILLIAM A. CBHF ALLEN 2-4-19

Renovations and Additions
M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL DEMOLITION RISER, RISER DIAGRAM AND DETAILS

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 12/21/2018
REVISIONS

SHEET NUMBER E6.01

EXISTING PANEL PP-4CR

TYPE: BOLT-ON | 480 MOUNT: SURFACE FEED: BOTTOM | 277 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
RTU-1 KITCHEN A/C & HEAT	8,313	30/3	1	11,305			2	20/3	2,992	WOOD
|	8,313	|	3		11,305		4	|	2,992	|
|	8,313	|	5			11,305	6	|	2,992	|
SPACE		-	7				8			SPACE
SPACE		-	9				10	-		SPACE
SPACE		-	11				12	-		SPACE
DOBOTTOM OVEN	5,666	20/3	13	11,332			14	20/3	5,666	TOP OVEN
|	56,666	|	15		62,332		16	|	5,666	|
|	56,666	|	17			62,332	18	|	5,666	|
SPACE		-	19				20	-		SPACE
SPACE		-	21				22	-		SPACE
SPACE		-	23				24	-		SPACE
SPACE		-	25				26	-		SPACE
SPACE		-	27				28	-		SPACE
SPACE		-	29				30	30/3		EXISTING STEAMER
SPARE		20/1	31				32	|		|
OUTLET IN LAUNDRY		30/3	33				34	|		|
|		|	35				36	-		SPACE
|		|	37				38	-		SPACE
SPACE		-	39				40	-		SPACE
CAFE EMERG LTS		20/1	41				42	-		SPACE
				22,637	73,637	73,637	TOTAL VOLT AMPS			
				82	266	266	CONN. AMPS			

NOTES:

400 A. BUS (COPPER)
400 A. MAIN CIRCUIT BREAKER

22 KAIC MIN.

EXISTING PANEL PP-4CR REVISED

TYPE: BOLT-ON | 480 MOUNT: SURFACE FEED: BOTTOM | 277 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
(X)RTU-1 KITCHEN A/C & HEAT	8,313	30/3	1	**10,308**			2	15/3	**1,995**	**KU01-EF (NOTE 2 & 3)**
|	8,313	|	3		**10,308**		4	|	**1,995**	|
|	8,313	|	5			**10,308**	6	|	**1,995**	|
SPACE		-	7				8	-		SPARE
SPACE		-	9				10	-		SPACE
SPACE		-	11				12	-		SPACE
(X)BOTTOM OVEN	5,666	20/3	13	11,332			14	20/3	5,666	(X)TOP OVEN
|	5,666	|	15		11,332		16	|	5,666	|
|	5,666	|	17			11,332	18	|	5,666	|
SPACE		-	19	**1,885**			20	**15/3**	**1,885**	**KU01-SF (NOTE 2 & 3)**
SPACE		-	21		**1,885**		22	|	**1,885**	|
SPACE		-	23			**1,885**	24	|	**1,885**	|
SPACE		-	25				26	-		SPACE
SPACE		-	27				28	-		SPACE
SPACE		-	29				30	30/3		(X)EXISTING STEAMER
SPARE		20/1	31				32	|		|
(X)OUTLET IN LAUNDRY		30/3	33				34	|		|
|		|	35				36	-		SPACE
|		|	37				38	-		SPACE
SPACE		-	39				40	-		SPACE
(X)CAFE EMERG LTS		20/1	41				42	-		SPACE
				23,525	**23,523**	**23,525**	TOTAL VOLT AMPS			
				85	**85**	**85**	CONN. AMPS			

NOTES:

1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.
2. UTILIZE EXISTING BREAKER.
3. PROVIDE BREAKER SHOWN, BREAKER AIC SHALL MATCH PANEL AIC RATING.

400 A. BUS (COPPER)
400 A. MAIN CIRCUIT BREAKER

22 KAIC MIN.

EXISTING PANEL 2CR

TYPE: BOLT-ON | 208 MOUNT: SURFACE FEED: BOTTOM | 120 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
ART KILN		30/3	1				2	20/1		SPARE
|		|	3				4	20/1		FOOD WARMER
|		|	5				6	15/3		BOOSTER HEATER
SPARE		20/1	7				8	|		|
BOOSTER HEATER		15/3	9				10	|		|
|		|	11				12	20/1		FLY FAN
|		|	13				14	20/1		SPARE
BOOSTER HEATER		30/2	15				16	20/1		SPARE
|		|	17				18	20/1		SERVICE LINE WARMME
SPARE		20/1	19				20	20/1		FRIDGE REC
SPARE		20/1	21				22	20/1		SPARE
SPACE		-	23				24	-		SPACE
SPACE		-	25				26	-		SPACE
SPACE		-	27				28	-		SPACE
SPACE		-	29				30	-		SPACE
							TOTAL VOLT AMPS			
							CONN. AMPS			

NOTES:

125 A. BUS (COPPER)
125 A. MAIN CIRCUIT BREAKER

EXISTING PANEL 2CR REVISED

TYPE: BOLT-ON | 208 MOUNT: SURFACE FEED: BOTTOM | 120 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
(X)ART KILN		30/3	1	**1,600**			2	20/1	**1,600**	**HOOD CTRL'S & LIGHTS (NOTE 2)**
|		|	3				4	20/1		(X)FOOD WARMER
|		|	5				6	15/3		**SPARE (NOTE 4)**
SPARE		20/1	7				8	|		|
SPARE (NOTE 4)		15/3	9				10	|		|
|		|	11				12	20/1		(X)FLY FAN
|		|	13	**1,085**			14	20/1	**1,085**	**GWH1, GWH2 & CP2 (NOTE 2)**
SPARE (NOTE 4)		30/2	15		**100**		16	20/1	**100**	**E-STOP 120V POWER**
|		|	17				18	20/1		(X)SERVICE LINE WARMME
WALK-IN COOLER LIGHT & EVAP (NOTE 2)	**550**	20/1	19	**550**			20	20/1		(X)FRIDGE REC
SPARE		20/1	21				22	20/1		SPARE
SPACE		-	23				24	-		SPACE
SPACE		-	25				26	-		SPACE
WALK-IN COOLER COND (NOTE 1 & 3)	**1,920**	**20/2**	27		**1,920**		28	-		SPACE
|	**1,920**	|	29			**1,920**	30	-		SPACE
				3,235	**2,020**	**1,920**	TOTAL VOLT AMPS			
				27	**17**	**16**	CONN. AMPS			

NOTES:

1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.
2. UTILIZE EXISTING BREAKER.
3. PROVIDE BREAKER INDICATED, BREAKER AIC RATING SHALL MATCH PANEL AIC.
4. LABEL BREAKER SPARE

125 A. BUS (COPPER)
125 A. MAIN CIRCUIT BREAKER

EXISTING PANEL 4H7 (TO BE REMOVED)

TYPE: BOLT-ON | 480 MOUNT: SURFACE FEED: BOTTOM | 277 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
DHE-1	3,000	30/3	1	3,000			2	30/3		SPARE
|	3,000	|	3		3,000		4	|		|
|	3,000	|	5			3,000	6	|		|
DHE-2	3,000	30/3	7	13,000			8	30/3	8,000	DHE-1
|	3,000	|	9		13,000		10	|	8,000	|
|	3,000	|	11			13,000	12	|	8,000	|
DHE-4	3,000	30/3	13	16,032			14	30/3	11,000	AC-7
|	3,000	|	15		19,002		16	|	11,002	|
|	3,000	|	17			19,002	18	|	11,002	|
				32,032	32,002	32,002	TOTAL VOLT AMPS			
				116	116	116	CONN. AMPS			

NOTES:

100 A. BUS (COPPER)
100 A. MAIN CIRCUIT BREAKER

22 KAIC MIN.

PANEL 4H7

TYPE: BOLT-ON | 480 MOUNT: SURFACE FEED: BOTTOM | 277 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
(X)V22-01 & 03	4,501	30/3	1	9,001			2	20/3	4,501	(X)V22-09, 10, 11, 12, 13 & 14
|	4,501	|	3		9,001		4	|	4,501	|
|	4,501	|	5			9,001	6	|	4,501	|
(X)V22-02	4,678	30/3	7	4,678			8	30/3		SPARE
|	4,678	|	9		4,678		10	|		|
|	4,678	|	11			4,678	12	|		|
(X)V22-04, 05, 06, 07 & 08	4,235	30/3	13	13,103			14	45/3	8,868	RTU-22
|	4,235	|	15		13,103		16	|	8,868	|
|	4,235	|	17			13,103	18	|	8,868	|
				26,782	26,782	26,782	TOTAL VOLT AMPS			
				97	97	97	CONN. AMPS			

NOTES:

1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.

200 A. BUS (COPPER)
200 A. MAIN CIRCUIT BREAKER

22 KAIC MIN.

EXISTING PANEL GP

TYPE: BOLT-ON | 208 MOUNT: SURFACE FEED: BOTTOM | 120 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
GYM FLOOR RECEPTACLE		20/1	1				2	20/1		RECEPTACLE MEZZALINE
GYM FLOOR RECEPTACLE		20/1	3				4	20/1		RECEPTACLE MEZZALINE
GIRLS LOCKER ROOM RECEPTACLE		20/1	5				6	20/1		GYM FLOOR RECEPTACLE
RECEPTACLE CORRIDOR #1		20/2	7				8	20/1		RECEPTACLES STAGE
RECEPTACLE CORRIDOR A		|	9				10	20/1		RECEPTACLES STAGE
BOYS LOCKER ROOM RECEPTACLES		20/1	11				12	20/1		SPARE
BOY EX FAN		20/1	13				14	20/1		GYM RECEPTACLES
UNIT RECEPTACLE		20/1	15				16	20/1		SPARE
GIRLS EX FAN		20/1	17				18	20/1		SPARE
SPACE		–	19				20	–		SPACE
SPACE		–	21				22	–		SPACE
SPACE		–	23				24	–		SPACE
SPACE		–	25				26	–		SPACE
SPACE		–	27				28	–		SPACE
SPACE		–	29				30	–		SPACE
							TOTAL VOLT AMPS			
							CONN. AMPS			

NOTES:

1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.

100 A. BUS (COPPER)
100 A. MAIN CIRCUIT BREAKER

22 KAIC MIN.

EXISTING PANEL GP REVISED

TYPE: BOLT-ON | 208 MOUNT: SURFACE FEED: BOTTOM | 120 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
(X)GYM FLOOR RECEPTACLE		20/1	1				2	20/1		(X)RECEPTACLE MEZZALINE
(X)GYM FLOOR RECEPTACLE		20/1	3				4	20/1		(X)RECEPTACLE MEZZALINE
GIRLS LOCKER ROOM RECEPTACLE (NOTE 2)	**1,080**	20/1	5			**1,080**	6	20/1		(X)GYM FLOOR RECEPTACLE
(X)RECEPTACLE CORRIDOR #1		20/2	7				8	20/1		(X)RECEPTACLES STAGE
(X)RECEPTACLE CORRIDOR A		|	9				10	20/1		(X)RECEPTACLES STAGE
BOYS LOCKER ROOM RECEPTACLES (NOTE 2)	**1,080**	20/1	11			**2,160**	12	20/1	**1,080**	**RCP6: GYM COACH OFFICES (NOTE 2)**
(X)BOY EX FAN		20/1	13				14	20/1		(X)GYM RECEPTACLES
(X)UNIT RECEPTACLE		20/1	15		**360**		16	20/1	**360**	**STAGE LIFT DJL (NOTE 2)**
(X)GIRLS EX FAN		20/1	17			**360**	18	20/1	**360**	**FLOOR BOX: GYM (NOTE 2)**
BLEACHERS NORTH (NOTE 3)	**793**	**20/3**	19	1,793			20	**20/1**	**1,000**	**DAKTRONIC'S SOUND EQUIPMENT**
|	**793**	|	21		**793**		22	–		SPACE
|	**793**	|	23			**793**	24	–		SPACE
BLEACHERS SOUTH (NOTE 3)	**793**	**20/3**	25	**793**			26	–		SPACE
|	**793**	|	27		**793**		28	–		SPACE
|	**793**	|	29			**793**	30	–		SPACE
				2,585	**1,945**	**5,185**	TOTAL VOLT AMPS			
				22	**16**	**43**	CONN. AMPS			

NOTES:

1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.
2. UTILIZE EXISTING BREAKER.
3. PROVIDE BREAKER SHOWN, BREAKER AIC SHALL MATCH PANEL AIC RATING.

100 A. BUS (COPPER)
100 A. MAIN CIRCUIT BREAKER

EXISTING PANEL LA

TYPE: BOLT-ON | 208 MOUNT: SURFACE FEED: BOTTOM | 120 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
FAN F1		20/1	1				2	20/1		HVAC CONTROL PANEL
FAN F2		20/1	3				4	20/1		CIRCULATION PUMP 1/6HP
FAN F3		20/1	5				6	20/1		REC COMP LAB 19 (1-04)
RCP: FROG COPY ROOM		20/1	7				8	20/1		REC COMP LAB 19 (1-04)
SPARE		20/1	9				10	20/1		REC COMP LAB 19 (1-04)
SPARE		20/1	11				12	20/1		SPARE
SPARE		20/1	13				14	30/2		WATER HEATER
SPARE		20/1	15				16	|		|
PACK HEAT PUMP #9		20/1	17				18	20/2		DATA ROOM 208VREC BY LOCKER 533
SPARE		20/1	19				20	|		|
SPARE		20/1	21				22	20/1		REC ROOF TOP DDC
DATA ROOM BY LOCKER 533		30/2	23				24	20/1		UNKNOWN
|		|	25				26	20/1		DATA ROOM BY LOCKER 533
DATA ROOM 35		20/2	27				28	60/2		UNKNOWN
|		|	29				30	|		|
DATA ROOM 35		20/2	31				32	100/3		SUB PANEL @ RM'S 6 & 7
|		|	33				34	|		|
DATA ROOM 35		20/2	35				36	|		|
|		|	37				38	100/3		UNKNOWN
DATA ROOM 35		20/2	39				40	|		|
|		|	41				42	|		|
							TOTAL VOLT AMPS			
							CONN. AMPS			

NOTES:

250 A. BUS (COPPER)
200 A. MAIN CIRCUIT BREAKER

EXISTING PANEL LA REVISED

TYPE: BOLT-ON | 208 MOUNT: SURFACE FEED: BOTTOM | 120 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
(X)FAN F1		20/1	1				2	20/1		(X)HVAC CONTROL PANEL
(X)FAN F2		20/1	3				4	20/1		(X)CIRCULATION PUMP 1/6HP
(X)FAN F3		20/1	5				6	20/1		(X)REC COMP LAB 19 (1-04)
RCP: FROG COPY ROOM		20/1	7				8	20/1		(X)REC COMP LAB 19 (1-04)
DHP02 (DAH02) (NOTE 1 & 2)	**998**	**20/2**	9			**998**	10	20/1		(X)REC COMP LAB 19 (1-04)
|	**998**	|	11			**998**	12	20/1		SPARE
SPARE		20/1	13				14	30/2		(X)WATER HEATER
SPARE		20/1	15				16	|		|
(X)PACK HEAT PUMP #9		20/1	17				18	20/2		(X)DATA ROOM 208VREC BY LOCKER 533
SPARE		20/1	19				20	|		|
SPARE		20/1	21				22	20/1		(X)REC ROOF TOP DDC
(X)DATA ROOM BY LOCKER 533		30/2	23				24	20/1		(X)UNKNOWN
|		|	25				26	20/1		(X)DATA ROOM BY LOCKER 533
(X)DATA ROOM 35		20/2	27				28	60/2		(X)UNKNOWN
|		|	29				30	|		|
(X)DATA ROOM 35		20/2	31				32	100/3		(X)SUB PANEL @ RM'S 6 & 7
|		|	33				34	|		|
(X)DATA ROOM 35		20/2	35				36	|		|
|		|	37				38	100/3		(X)UNKNOWN
(X)DATA ROOM 35		20/2	39				40	|		|
|		|	41				42	|		|
						998	TOTAL VOLT AMPS			
						8	CONN. AMPS			

NOTES:

1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.
2. REPLACE BREAKER WITH BREAKER INDICATED, BRK AIC SHALL MATCH PANEL AIC RATING.

250 A. BUS (COPPER)
200 A. MAIN CIRCUIT BREAKER

22 KAIC MIN.

PANEL MDP

SERVICE EQUIPMENT LISTED

TYPE: BOLT-ON | 480 MOUNT: FLOOR FEED: TOP | 277 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: XX | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
SPARE		60/3	1				2	30/3		SPD
|		|					|		|
SEWAGE TREATMENT PUMP		60/3	3				4	50/3		PANEL E
|		|					|		|
PANEL 2C THRU XFMR		100/3	5	8,998			6	110/3	8,998	PANEL 2P1 THRU XFMR
|		|		8,100			|	8,100	|
|		|			9,238				9,238	|
PANEL 4H-7		125/3	7				8	100/3		PANEL 4E
|		|					|		|
PANEL 4H-8		200/3	9				10	175/3		PANEL 4H-10 (4H-11)
|		|					|		|
SPARE		200/3	11				12	200/3		SPARE
|		|					|		|
PANEL HA		400/3	13				14	400/3		SPARE
|		|					|		|
PANEL 4C		400/3	15				16	400/3		PANEL 4B
|		|					|		|
PANEL 4M		600/3	17							UNUSABLE SPACE
|		|							UNUSABLE SPACE
PANEL 4D		800/3	18							UNUSABLE SPACE
|		|							UNUSABLE SPACE
				8,998	8,100	9,238	TOTAL VOLT AMPS		2,000	A. BUS (COPPER)
				32	29	33	CONN. AMPS		2,000	A. MAIN CIRCUIT BREAKER

NOTE:

1. HVAC EQUIPMENT SHALL USE TYPE HACR BREAKERS.
2. ARC ENERGY REDUCTION REQUIRED AT ALL BREAKERS THAT CAN BE ADJUSTED TO 1200AMPS OR MORE PER NEC 240.87.

*GROUND FAULT PROTECTION REQUIRED AT MAIN.
**ARC ENERGY REDUCTION REQUIRED AT ALL BREAKERS 1200AMPS OR MORE.

65 KAIC MIN.

PANEL 2P1

TYPE: BOLT-ON | 208 MOUNT: SURFACE FEED: BOTTOM | 120 V, | 3 PH, | 4 WIRE | PROVIDE IF CHECKED: | EQUIP. GROUND BUS: NEUTRAL BUS, GUTTER TAPS, SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA A	LOAD VA B	LOAD VA C	CKT #	CKT BKR	LOAD VA	LOAD SERVED
RCP5: DATA MNGR	720	20/1	1	1,920			2	20/1	1,200	RCP: ICE MACHINE
RCP: ELECT RM	180	20/1	3		1,380		4	20/1	1,200	RCP: WASHER
RCP: LOUNGE COUNTER	180	20/1	5			2,680	6	30/2	2,500	RCP: DRYER
RCP: LOUNGE COUNTER	180	20/1	7	2,680			8	|	2,500	|
RCP: REFRIG LOUNGE	1,200	20/1	9		1,740		10	20/1	540	RCP5: LAUNDRY, STORAGE, CORRIDOR
RCP5: LOUNGE, CORR., SOCIAL WRK, AIG	900	20/1	11			1,898	12	25/2	998	DHP01 (DAH01)
FA PRINTER (NOTE 2)	400	20/1	13	1,398			14	|	998	|
SPARE		20/1	15		1,140		16	20/1	1,140	BASKETBALL GOAL HOIST No. 1
RCP5: RECEPTION COUNTER	540	20/1	17			1,680	18	20/1	1,140	BASKETBALL GOAL HOIST No. 2
RCP5: RECEPTION COUNTER	360	20/1	19	1,500			20	20/1	1,140	BASKETBALL GOAL HOIST No. 3
RCP5: RECEPTION, PRINCIPLE, CONF.	1,080	20/1	21		2,220		22	20/1	1,140	BASKETBALL GOAL HOIST No. 4
RCP5: CORR, NURSE, AP	540	20/1	23			1,680	24	20/1	1,140	BASKETBALL GOAL HOIST No. 5
RCP: NURSE TOILET	180	20/1	25	1,320			26	20/1	1,140	BASKETBALL GOAL HOIST No. 6
RCP: NURSE TOILET	180	20/1	27		900		28	20/1		SPARE
RCP5: LARGE CONF RM, CORR., RESOURCE	900	20/1	29			900	30	20/1		SPARE
RCP: STAFF TOILET	180	20/1	31	180			32	–		SPACE
RCP5: CORR, RESOURCE	720	20/1	33		720		34	–		SPACE
SPARE		20/1	35				36	–		SPACE
SPARE		20/1	37				38	–		SPACE
SPARE		20/1	39				40	–		SPACE
ADEMCO VISTA 20 PANEL	400	20/1	41				42	–		SPACE
				8,998	6,100	9,238	TOTAL VOLT AMPS		200	A. BUS (COPPER)
				75	68	77	CONN. AMPS		200	A. MAIN CIRCUIT BREAKER

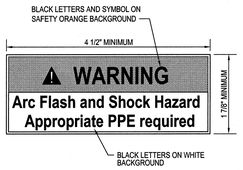
NOTES:

1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.
2. PROVIDE BREAKER HANDEL LOCKING DEVICE.

22 KAIC MIN.

LOAD SUMMARY

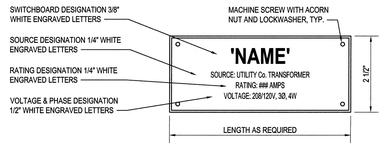
VOLTAGE	PHASE
480	3
EXISTING DEMAND LOAD	
(DETERMINED BY 1 YEAR POWER BILLS)	800,000 WATTS
ASSUMED POWER FACTOR OF .8	1,000,000 VA
EXISTING DEMAND AMPS	1,203 AMPS
x 125% (PER NEC 220.87)	1,504 AMPS
LOADS REMOVED THIS PROJECT	
HVAC	
KITCHEN HOOD	8,976 VA
BOOSTER HEATER's (QTY 3)	12,465 VA
DEH's (QTY 4)	41,400 VA
RTU-22 (OLD AC-7)	33,000 VA
SUB-TOTAL HVAC DEMAND	95,841 VA
SUB-TOTAL HVAC DEMAND	115 Amps
LIGHTING	
TOTAL LIGHTING LOAD	92,624 VA
LIGHTING LOAD x 1.25	115,780 VA
TOTAL LIGHTING REMOVED THIS PROJECT	139 AMPS
RECEPTACLES	
TOTAL RECEPTACLES REMOVED THIS PROJECT	10,800 VA
TOTAL RECEPTACLES REMOVED THIS PROJECT	13 AMPS
EQUIPMENT	
EWH	128,029 VA
TOTAL EQUIPMENT REMOVED THIS PROJECT	128,029 VA
TOTAL EQUIPMENT REMOVED THIS PROJECT	154 AMPS
TOTAL LOAD REMOVED THIS PROJECT	422 AMPS
TOTAL LOAD REMOVED THIS PROJECT	350,450 VA
LOAD ADDED THIS PROJECT	
LARGEST MOTOR APPROX. AMPS	40 AMPS
LARGEST MOTOR APPROX. AMPS X .25	10 AMPS
HVAC	
VAV's (QTY 14)	53,742 VA
RTU (QTY 1)	26,606 VA
DHP'S (QTY 2)	3,661 VA
DAH'S (QTY 2)	333 VA
KU01EF	5,986 VA
KU01SF	5,634 VA
EF1	400 VA
SUB-TOTAL HVAC DEMAND	96,361 VA
SUB-TOTAL HVAC DEMAND	116 AMPS
EQUIPMENT	
GWH's (QTY 2) & CP2	1,085 VA
BLEACHERS (QTY 2)	4,758 VA
STAGE LIFT	360 VA
ADEMCO VISTA 20 PANEL	400 VA
WALK-IN COOLER LTS/EVAP	550 VA
WALK-IN COOLER COND	3,840 VA
BASKETBALL GOAL HOIST'S (QTY 6)	6,840 VA
DAKTRONIC'S SOUND EQUIPMENT	1,000 VA
SUB-TOTAL EQUIPMENT DEMAND	19,833 VA
SUB-TOTAL EQUIPMENT DEMAND	23 AMPS
ADD FOR LARGEST MOTOR	10 AMPS
TOTAL EQUIPMENT DEMAND	33 AMPS
LIGHTING	
LIGHTS (INTERIOR)	50,270 VA
TOTAL LIGHTING LOAD	50,270 VA
LIGHTING LOAD x 1.25	62,838 VA
TOTAL DEMAND FOR LIGHTING	76 AMPS
RECEPTACLES	16,700 VA
FIRST 10000VA	10,000 VA
REMAINDER @ 50%	3,350 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	13,350 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	16 AMPS
TOTAL LOAD ADDED THIS PROJECT	240 AMPS
TOTAL LOAD ADDED THIS PROJECT	199,695 VA
NET LOAD CHANGED THIS PROJECT	1,322 AMPS
NET LOAD CHANGED THIS PROJECT	1,099,245 VA



NOTES:
1. LABEL SHOWN CAN BE SOURCED FROM SAFETYSIGN.COM, OTHER SUPPLIERS ARE COMPLIANTSIGNS.COM & SETON.COM

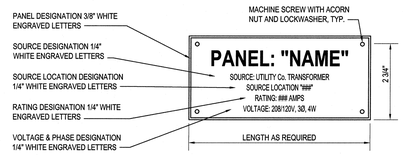
2. THIS WARNING LABEL MINIMALLY COMPLIES WITH NEC, HOWEVER IF ELECTRICAL EQUIPMENT IS LIKELY TO REQUIRE EXAMINATION OR MAINTENANCE WHILE ENERGIZED A DETAILED SHORT CIRCUIT AND ARC FLASH HAZARD ANALYSIS IS RECOMMENDED.

1 E6.02 **Electrical Equipment Warning Label Detail**
Not To Scale



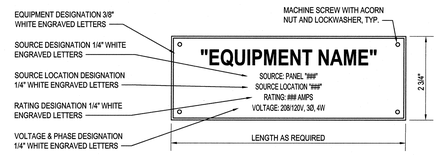
NOTE: SEE SPECS. SECTION 260553 FOR NAMEPLATE MATERIAL AND ENGRAVING COLORS.

2 E6.02 **Switchboard Nameplate Detail**
Not To Scale



NOTE: SEE SPECS. SECTION 260553 FOR NAMEPLATE MATERIAL AND ENGRAVING COLORS.

3 E6.02 **Typical Panelboard Nameplate Detail**
Not To Scale



NOTE: SEE SPECS. SECTION 260553 FOR NAMEPLATE MATERIAL AND ENGRAVING COLORS.

4 E6.02 **Typical Equipment Nameplate Detail**
Not To Scale

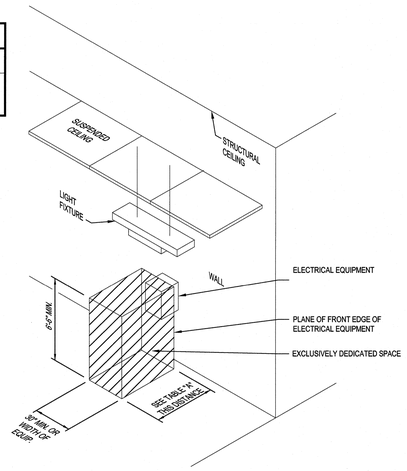
NOTE:
THIS FIGURE ILLUSTRATES THE ADDITIONAL EXCLUSIVELY DEDICATED SPACE REQUIRED OVER AND UNDER THE ELECTRICAL EQUIPMENT FOR THE CABLES, RACEWAYS, ECT... TO AND FROM THE ELECTRICAL EQUIPMENT REQUIRED BY SECTION 110-26 OF THE NATIONAL ELECTRICAL CODE.

4 E6.02 **Dedicated Space for Electrical N.E.C. Artical 110-26 Equipment**
Not To Scale

Table A - Working Clearances

VOLTAGE TO GROUND NOMINAL	CONDITION:	MINIMUM CLEAR DISTANCE (FEET)		
		1	2	3
0 - 150		3	3	3
151 - 600		3	3 1/2	4

WHERE THE "CONDITIONS" ARE AS FOLLOWS:
1. EXPOSED LIVE PARTS ON ONE SIDE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES EFFECTIVELY GUARDED BY SUITABLE WOOD OR OTHER INSULATING MATERIALS. INSULATED WIRE OR INSULATED BUSBARS OPERATING AT OVER 300V SHALL NOT BE CONSIDERED LIVE PARTS.
2. EXPOSED LIVE PARTS ON ONE SIDE AND GROUNDED PARTS ON THE OTHER SIDE.
3. EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE (NOT GUARDED AS PROVIDED IN CONDITION 1) WITH THE OPERATOR BETWEEN.



6 E6.02 **Working Clearance for Electrical Equipment**
Not To Scale

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF
9-4-19

Renovations and Additions
M.C.S. Noble Middle School
6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL DETAILS

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 12/21/2018
REVISIONS

SHEET NUMBER
E6.03

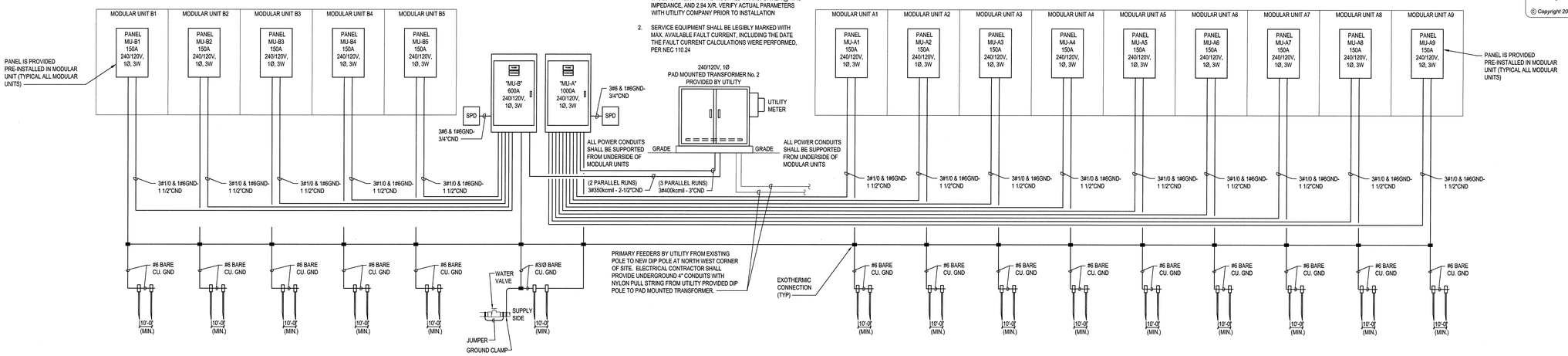
CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

AVAILABLE FAULT CURRENT

AT PNL MU-3: 34,746 AMPS
AT PNL MU-4: 32,362 AMPS

SHORT CIRCUIT CALCULATION:

NOTE:
1. SHORT CIRCUIT CALCULATION COMPLETED ON 04/10/2018, BASED ON A 250KVA PAD MOUNTED TRANSFORMER @ 1.7% IMPEDANCE, AND 2.94 X/R. VERIFY ACTUAL PARAMETERS WITH UTILITY COMPANY PRIOR TO INSTALLATION
2. SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED WITH MAX. AVAILABLE FAULT CURRENT, INCLUDING THE DATE THE FAULT CURRENT CALCULATIONS WERE PERFORMED, PER NEC 110.24



1 RISER DIAGRAM - MOBILE UNITS
NOT TO SCALE

PANEL MU-B

SERVICE EQUIPMENT LISTED

TYPE: NEMA 3R
BOLT-ON
240 V, 120 V, 1 PH, 3 WIRE
MOUNT: SURFACE
FEED: BOTTOM
PROVIDE IF CHECKED: XX XX
EQUIP. GROUND BUS
NEUTRAL BUS
GUTTER TAPS
SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	A	B	CKT #	CKT BKR	LOAD VA	LOAD SERVED
PANEL MU-B1	10,828	150/2	1	10,828		2			
	10,280	|			10,280				
PANEL MU-B2	10,828	150/2	3	10,828		4			
	10,280	|			10,280				
PANEL MU-B3	10,828	150/2	5	10,828		6			
	10,280	|			10,280				
PANEL MU-B4	10,796	150/2	7	10,796		8			
	10,280	|			10,280	10			
PANEL MU-B5	10,828	150/2	9	10,828					
	10,280	|			10,280	12			
SPACE		-	11			14	60/2		SPD
SPACE		-	13						|
				54,108	51,400	TOTAL VOLT AMPS		600	A. BUS (COPPER)
				451	428	CONN. AMPS		600	A. MAIN CIRCUIT BREAKER

NOTE:
1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.

42 KAIC MIN.

PANEL MU-A

SERVICE EQUIPMENT LISTED

TYPE: NEMA 3R
BOLT-ON
240 V, 120 V, 1 PH, 3 WIRE
MOUNT: SURFACE
FEED: BOTTOM
PROVIDE IF CHECKED: XX XX
EQUIP. GROUND BUS
NEUTRAL BUS
GUTTER TAPS
SUB-FEED LUGS

LOAD SERVED	LOAD VA	CKT BKR	CKT #	A	B	CKT #	CKT BKR	LOAD VA	LOAD SERVED
PANEL MU-A1	10,828	150/2	1	21,656		2	150/2	10,828	PANEL MU-A6
	10,280	|			20,560		|	10,280	|
PANEL MU-A2	10,828	150/2	3	21,656		4	150/2	10,828	PANEL MU-A7
	10,280	|			20,560		|	10,280	|
PANEL MU-A3	10,828	150/2	5	21,656		6	150/2	10,828	PANEL MU-A8
	10,280	|			20,560		|	10,280	|
PANEL MU-A4	10,796	150/2	7	10,796		8	-		SPACE
	10,280	|			21,108		150/2	10,828	PANEL MU-A9
PANEL MU-A5	10,828	150/2	9	21,108		10	|	10,280	|
	10,280	|			10,460		20/1	180	RCP: ON SERVICE EQ RACK
SPD		60/2	11			12	-		SPACE
|		|			14	-		SPACE
				96,972	93,248	TOTAL VOLT AMPS		1000	A. BUS (COPPER)
				807	777	CONN. AMPS		1000	A. MAIN CIRCUIT BREAKER

NOTE:
1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.

42 KAIC MIN.

LOAD SUMMARY: MU-B

VOLTAGE	PHASE
240	1
LARGEST MOTOR APPROX. AMPS	51 AMPS
LARGEST MOTOR APPROX. AMPS x .25	13 AMPS
HVAC	
HVAC (5 UNITS)	88,480 VA
FANS (5 UNITS)	1,500 VA
SUB-TOTAL HVAC DEMAND	89,980 VA
SUB-TOTAL HVAC DEMAND	375 AMPS
EQUIPMENT	
WATERHEATER	4,500 VA
FA POWER SUPPLY	400 VA
SUB-TOTAL EQUIPMENT DEMAND	4,900 VA
SUB-TOTAL EQUIPMENT DEMAND	20 AMPS
ADD FOR LARGEST MOTOR	13 AMPS
TOTAL EQUIPMENT DEMAND	33 AMPS
LIGHTING	
LIGHTS (PER ON NEC 220.12)	8,600 VA
TOTAL LIGHTING LOAD	8,600 VA
LIGHTING LOAD x 1.25	10,750 VA
TOTAL DEMAND FOR LIGHTING	45 AMPS
RECEPTACLES	
RECEPTACLES	10,000 VA
FIRST 10000VA	10,000 VA
REMAINDER @ 50%	VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	10,000 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	42 AMPS
TOTAL DEMAND BUILDING AMPS	495 AMPS
TOTAL DEMAND BUILDING AMPS	118,690 VA
TOTAL BUILDING CONNECTED LOAD	113,480 VA

LOAD SUMMARY: MU-A

VOLTAGE	PHASE
240	1
LARGEST MOTOR APPROX. AMPS	51 AMPS
LARGEST MOTOR APPROX. AMPS x .25	13 AMPS
HVAC	
HVAC (9 UNITS)	159,264 VA
FANS (10 UNITS)	3,000 VA
SUB-TOTAL HVAC DEMAND	162,264 VA
SUB-TOTAL HVAC DEMAND	676 AMPS
EQUIPMENT	
WATERHEATER	4,500 VA
FA POWER SUPPLY	400 VA
SUB-TOTAL EQUIPMENT DEMAND	4,900 VA
SUB-TOTAL EQUIPMENT DEMAND	20 AMPS
ADD FOR LARGEST MOTOR	13 AMPS
TOTAL EQUIPMENT DEMAND	33 AMPS
LIGHTING	
LIGHTS (PER ON NEC 220.12)	15,990 VA
TOTAL LIGHTING LOAD	15,990 VA
LIGHTING LOAD x 1.25	19,988 VA
TOTAL DEMAND FOR LIGHTING	83 AMPS
RECEPTACLES	
RECEPTACLES	18,180 VA
FIRST 10000VA	10,000 VA
REMAINDER @ 50%	4,090 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	14,090 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	59 AMPS
TOTAL DEMAND BUILDING AMPS	851 AMPS
TOTAL DEMAND BUILDING AMPS	204,302 VA
TOTAL BUILDING CONNECTED LOAD	201,334 VA

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER WILLIAM ALLEN CBHF
2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

ELECTRICAL RISER DIAGRAM, PANEL SCHEDULES & LOAD SUMMARIES

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER EM0.01

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2521
Fax - (910) 762-8506

SEAL 023311 ENGINEER WILLIAM ALLEN CRUSE

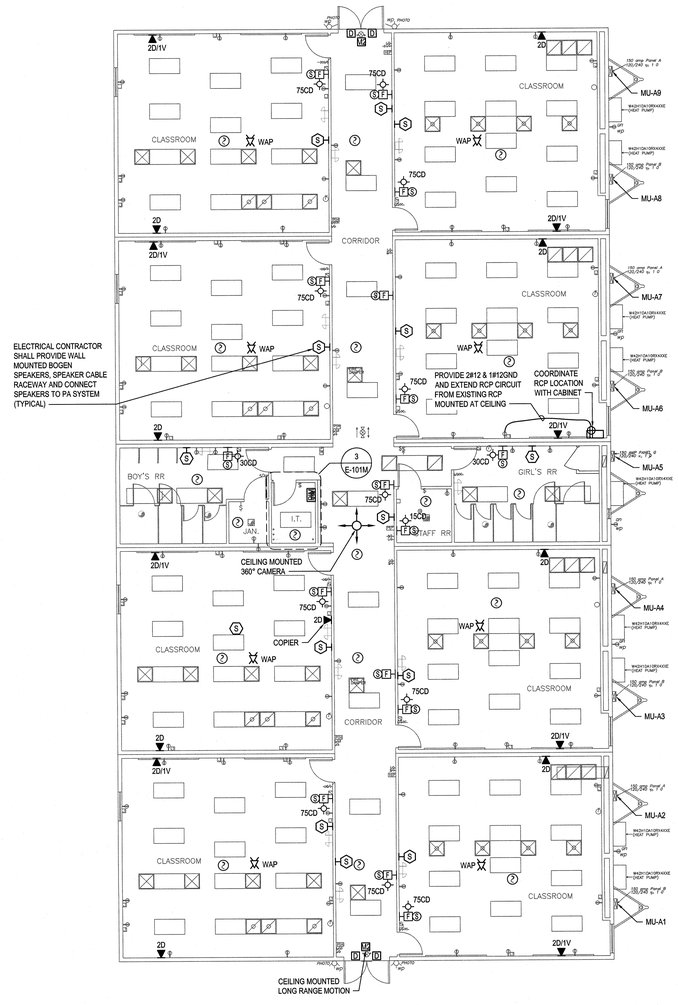
2-4-19

Renovations to: M.C.S. Noble Middle School

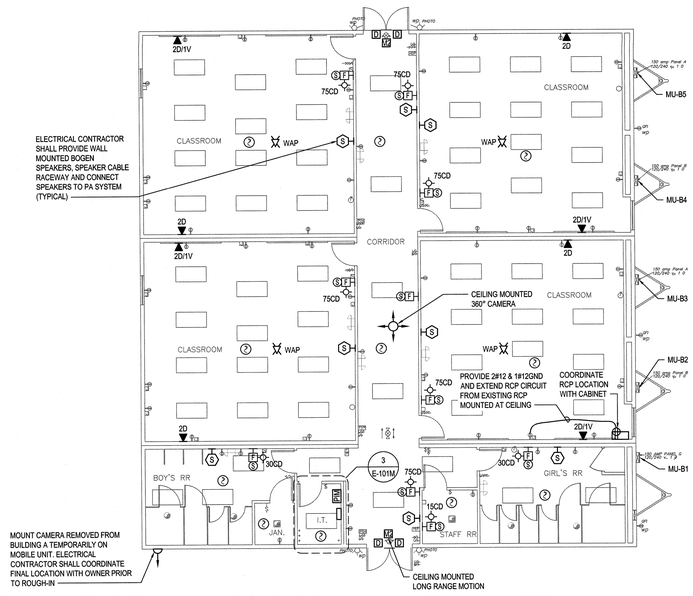
6520 Market Street
Wilmington, North Carolina 28405

NOTES

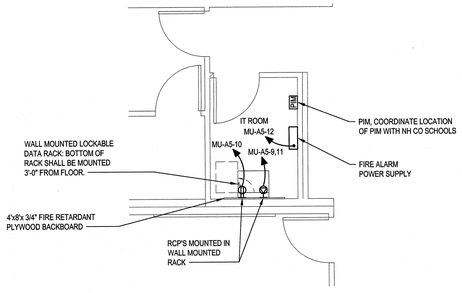
1. ALL CAT6 CABLE ROUTED BELOW MOBILE UNITS SHALL BE RATED FOR WET LOCATION.



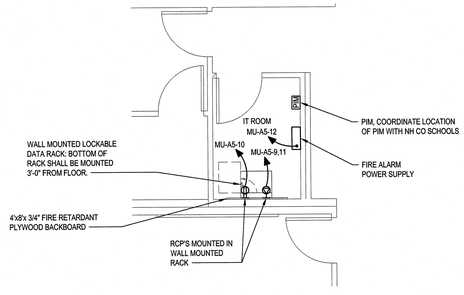
1 EMU1.01 **Power / DATA / Security / FA Plan - Temporary Mobile Unit A**
scale: 1/8" = 1'-0"



2 EMU1.01 **Power / DATA / Security / FA Plan - Temporary Mobile Unit B**
scale: 1/8" = 1'-0"



4 EMU1.01 **Enlarged MU-B IT Room**
scale: 1/8" = 1'-0"



3 EMU1.01 **Enlarged MU-A IT Room**
scale: 1/8" = 1'-0"

POWER FLOOR PLAN - MOBILE UNITS A & B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER
EMU1.01

MANUAL FIRE ALARM NOTES

1. AS A MINIMUM THE FIRE ALARM SYSTEM SHALL INCLUDE FIRE ALARM CONTROL PANEL VOICE/ALARM COMMUNICATION SYSTEM, DETECTORS, PULL STATIONS, PANEL. SPEAKER/STROBES AND SPRINKLER MONITORING WITH FIRE RATED CABLE. THE FIRE ALARM SYSTEM SHALL MEET NFPA REQUIREMENTS, THE NATIONAL ELECTRICAL CODE, THE STATE CODES, AND THE LOCAL BUILDING CODES.

2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CABLE, MATERIALS AND EQUIPMENT AS SHOWN ON THE DRAWINGS/OR HEREIN SPECIFIED. ALL SYSTEM COMPONENTS SPECIFIED HEREIN, AS WELL AS THEIR INSTALLATION, SHALL COMPLY WITH APPLICABLE STANDARDS OF THE NATIONAL ELECTRICAL CODE, NATIONAL FIRE PROTECTION ASSOCIATION, AND LOCAL CODES HAVING AUTHORITY. ALL EQUIPMENT SHALL BE UL LISTED FOR FIRE ALARM SYSTEM USE.

3. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE INSTALLED AND CONNECTED UNDER THE DIRECTION AND SUPERVISION OF A MANUFACTURER'S REPRESENTATIVE. UPON COMPLETION OF INSTALLATION, THE MANUFACTURER'S REPRESENTATIVE SHALL PERFORM ALL OPERATIONAL TESTS AND ADJUSTMENTS AND CERTIFY IN WRITING THAT THE SYSTEM IS PROPERLY INSTALLED AND FUNCTIONS AS SPECIFIED.

4. ALL WIRING SHALL BE SYSTEM OR UL LISTED FIRE RATED CABLE AND COLOR CODED TO ALLOW EASE OF IDENTIFICATION OF THE DIFFERENT CIRCUITRY REQUIRED FOR THE SYSTEM. NO CIRCUIT SHALL CHANGE COLOR AT ANY POINT END TO END.

5. THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE SHALL PROVIDE SUPERVISION OF FINAL SYSTEM PANEL CONNECTIONS, PERFORM A COMPLETE FUNCTIONAL TEST OF THE SYSTEM, AND A WRITTEN REPORT TO THE CONTRACTOR ATTESTING THE PROPER OPERATION OF THE COMPLETED SYSTEM.

6. THE CONTRACTOR SHALL PROVIDE A ONE YEAR WARRANTY FOR THE ALARM SYSTEM, ALONG WITH OTHER FORMS OR CERTIFICATE REQUIRED BY THE LOCAL JURISDICTION.

7. SYSTEM OPERATION

   a) THE OPERATION OF ANY MANUAL PULL STATION, OR ANY OTHER SYSTEM ALARM INDICATOR, SHALL CAUSE ALL ALARM SIGNALS, BOTH AUDIBLE AND VISUAL TO ENERGIZE.

   b) THE DEVICE FROM WHICH THE ALARM ORIGINATED SHALL BE INDICATED AT THE CONTROL PANEL, BOTH AUDIBLY AND VISUALLY. THE APPROPRIATE ALARM LED SHALL PULSE AND SHALL BE ILLUMINATED CONTINUOUSLY AFTER IT HAS BE ACKNOWLEDGED AT THE CONTROL PANEL.

   c) FIRE ALARM SYSTEM SHALL USE A 120 VOLT POWER SOURCE WITH BATTERY BACK-UP. FIRE ALARM SYSTEM SHALL BE 24 VOLT.

8. THE SYSTEM SHALL BE A MONITORED ALARM SYSTEM.

9. EQUIPMENT SHALL CONSIST OF THE FOLLOWING:
   a) MASTER FIRE ALARM CONTROL PANEL WITH BATTERY BACK-UP.

   b) MANUAL STATIONS: MANUAL STATIONS SHALL BE CONSTRUCTED OF HIGH IMPACT, RED LEXAN WITH RAISED LETTERING. MANUAL STATIONS SHALL BE LOCATED NOT MORE THAN FOUR FEET ABOVE THE FINISHED FLOOR TO THE CENTER OF THE BOX. STATIONS SHALL BE LOCATED NOT MORE THEN FIVE FEET FROM EACH DESIGNATED EXIT-WAY AND THE TRAVEL DISTANCE SHALL NOT EXCEED 200 FEET.

   c) COMBINATION AUDIO AND VISUAL SIGNAL: AUDIO VISUAL FIRE ALARM SIGNAL SHALL BE SURFACE MOUNTED WITH FLASHER. UNITS SHALL BE RED IN COLOR. THE LEXAN LENS SHALL BE TRIANGULAR IN SHAPE TO SIGNIFICANTLY IMPROVE SIDE VIEWING VISIBILITY. THE UNIT SHALL MOUNT ON A STANDARD FOUR INCH ELECTRICAL BOX. A MATCHING TRIM PLATE SHALL BE SUPPLIED. THE LENS SHALL BE LETTERED RED "FIRE". THE AUDIO VISUAL SIGNALS SHALL MEET REQUIREMENTS OF ADA.

   d) SMOKE DETECTOR: PROVIDE SOLID STATE PHOTO ELECTRIC TYPE WITH TWO WIRE OPERATION AND 360° SMOKE ENTRY FOR FACP.

10. PROVIDE FIRE ALARM CONTROL PANEL VOICE/ALARM COMMUNICATION SYSTEM

    a) IN THE EVENT OF A VALVE CLOSURE THAT ACTIVATES A TAMPER SWITCH, THE TROUBLE SIGNALS (BOTH AUDIBLE AND VISUAL) SHALL ACTIVATE AT THE CONTROL PANEL. IN ADDITION, THE ASSOCIATED CIRCUIT TROUBLE LED SHALL ILLUMINATE TO INDICATE THE TAMPER SWITCH CLOSURE. BY MEANS OF A SILENCING SWITCH, IT SHALL BE POSSIBLE TO TEMPORALLY SILENCE THE AUDIBLE ALARM, THE AUDIBLE ALARM SHALL REACTIVATE AUTOMATICALLY ON A PERIODIC BASIS UNTIL THE SYSTEM IS CORRECTED. IT SHALL NOT BE POSSIBLE TO EXTINGUISH THE TROUBLE LIGHT UNTIL THE SYSTEM IS CORRECTED.

    b) ALL WIRING SHALL BE INSTALLED IN COMPLIANCE WITH N.E.C., NFPA 72, ALL STATE AND LOCAL REQUIREMENTS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

    c) SLEEVE AND SEAL ALL PENETRATIONS THROUGH FIRE WALLS.

    d) WIRING SHALL BE A MINIMUM OF NO. 14 AWG UNLESS OTHERWISE NOTED.

11. ALL WORK PERFORMED AND ALL MATERIAL FURNISHED UNDER THIS CONTRACT SHALL BE FREE FROM DEFECTS AND SHALL REMAIN SO FOR A PERIOD OF AT LEAST ONE YEAR FROM THE DATE OF ACCEPTANCE.

12. THE SMOKE DUCT DETECTOR SHALL BE FURNISHED AND TERMINATED BY THE FIRE ALARM CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR.

13. SHOP DRAWINGS MUST BE SUBMITTED BY THE FIRE ALARM CONTRACTOR COMPLYING WITH THE FIRE ALARM PLAN REVIEW REQUIREMENTS POLICY - JANUARY 2006 BEFORE PERMITTING BY THE WILMINGTON FIRE DEPT. THESE DRAWINGS DO NOT CONSTITUTE APPROVAL AND MAY CHANGE AFTER A FULL REVIEW BY THE WILMINGTON FIRE DEPT. A SEPARATE PERMIT MUST BE OBTAINED PRIOR TO INSTALLATION.

14. IN CORRIDORS WHERE MORE THAN TWO VISIBLE NOTIFICATION APPLIANCES ARE IN ANY FIELD OF VIEW, THEY SHALL FLASH IN SYNCHRONIZATION.

15. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR MODULES TO SHUTDOWN HVAC EQUIPMENT DURING ALARM CONDITION.

16. PROVIDE (1) 2" CONDUIT FOR A DEDICATED PHONE LINE FOR FIRE PROTECTION DIALER AND BACKUP LINE FROM EXTERIOR CABINET TO FACP.

17. ALL FIRE ALARM WORK AND DEVICES SHALL BE INSTALLED AND TERMINATED BY A NICET LEVEL 2 FIRE ALARM TECHNICIAN.

18. IN THE EVENT OF AN ALARM THERE SHALL BE A "GLOBAL" SHUT DOWN OF ALL AIR HANDLERS.

FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
F	FIRE ALARM MANUAL STATION, 48" AFF
15cd HF S	FIRE ALARM SPEAKER/STROBE DEVICE, 80" AFF, "15cd" INDICATES CANDELA RATING
15cd HF	FIRE ALARM VISUAL (ONLY) DEVICE, 80" AFF, "15cd" INDICATES CANDELA RATING
15cd F S	FIRE ALARM SPEAKER/STROBE DEVICE, CEILING MOUNTED, "15cd" INDICATES CANDELA RATING
15cd F	FIRE ALARM VISUAL (ONLY) CEILING MOUNTED "15cd" INDICATES CANDELA RATING
S	SMOKE DETECTOR, CEILING MOUNTED
SC	SMOKE/CARBON MONOXIDE DETECTOR, CEILING MOUNTED
SR	SMOKE DETECTOR, CEILING MOUNTED WITH ELEVATOR RECALL FUNCTION
H	HEAT DETECTOR, CEILING MOUNTED
CO	CARBON MONOXIDE DETECTOR
R	FIRE ALARM SYSTEM CONTROL MODULE
M	FIRE ALARM SYSTEM MONITOR MODULE
S	DUCT SMOKE DETECTOR, REMOTE INDICATING DEVICE (RAIL)
HR	DUCT SMOKE DETECTOR, REMOTE INDICATING DEVICE (RAIL), WALL MOUNTED
I	ISOLATION MODULE
HF	WATER BELL
	SPRINKLER TAMPER SWITCH
	SPRINKLER FLOW SWITCH
S S BT BR	FIRE ALARM LINEAR BEAM SMOKE DETECTOR, INSTALLED APPROX. 12" BELOW CEILING, OR PER LISTING. PROVIDE REMOTE TEST/STATUS SWITCH AT 60" AFF BELOW DEVICE
	EXISTING DOOR HOLD OPEN DEVICE SHALL REMAIN UNLESS SPECIFICALLY INDICATED TO BE REMOVED.
FACP	FIRE ALARM CONTROL PANEL VOICE/ALARM COMMUNICATION SYSTEM
PIV	POST INDICATOR VALVE (COORDINATE LOCATION WITH CIVIL DRAWINGS)

(SYMBOLS SHOWN FOR REFERENCE ONLY AND MAY NOT IMPLY CONTRACTUAL REQUIREMENTS)

FIRE ALARM SYSTEM DEMOLITION NOTES

1. THE BUILDING WILL REMAIN OCCUPIED DURING THE DEMOLITION AND CONSTRUCTION PHASES OF THE PROJECT, THE EXISTING FIRE ALARM SYSTEM AND DEVICES SHALL REMAIN IN PLACE AND IN OPERATION UNTIL NEW SYSTEM IS ACCEPTED BY THE AHJ. AFTER ACCEPTANCE OF THE NEW FIRE ALARM SYSTEM THE FIRE ALARM CONTRACTOR SHALL REMOVE ALL FIRE ALARM PANELS, FIRE ALARM DEVICES, AND ASSOCIATED WIRING WITHIN THE BUILDING. CONTRACTOR SHALL FIELD VERIFY ALL DEVICES HAVE BEEN REMOVED UPON COMPLETION WHETHER SPECIFICALLY SHOWN ON DRAWINGS OR NOT.

2. COORDINATE DECOMMISSION OF EXISTING FIRE ALARM CONTROL PANEL WITH OWNER. CONTROL PANEL AND DEVICES MUST BE SALVAGED IN OPERATIONAL CONDITION WITHOUT DAMAGE. TURN OVER SALVAGED CONTROL PANELS AND DEVICES TO OWNER OR AT OWNERS DIRECTION REMOVE FROM SITE.

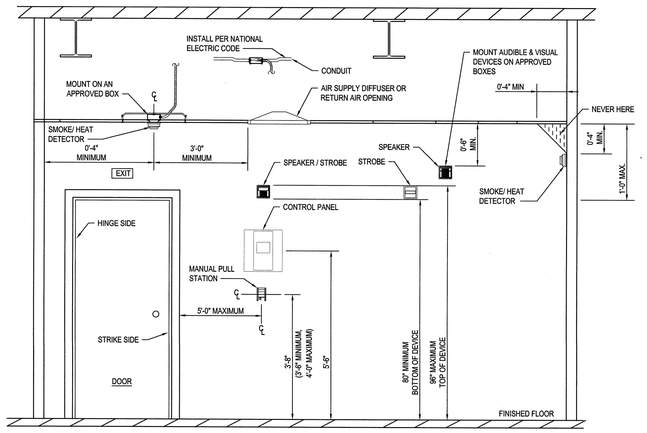
3. ALL CONDUIT, WIRING AND OTHER MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.

4. ABANDONED WIRING AND CONDUIT SHALL BE REMOVED BACK TO ITS SOURCE. AT ELECTRICAL PANELS, REMOVE CONDUCTORS COMPLETELY AND REMOVE CONDUIT BACK TO CEILING SPACE DIRECTLY ABOVE PANEL AND CAP. ABANDONED CIRCUITS SHALL BE TURNED OFF AND LABELED AS SPARE.

5. FINISHES IN AREAS AROUND DEVICES SHALL BE REPAIRED/REPLACED TO MATCH EXISTING AREAS (EX. NEW CEILING TILE WHERE DEVICE AND BOX IS REMOVED, ETC.).

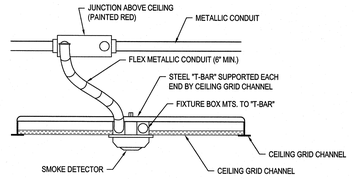
6. PROTECT ALL EXISTING TELEPHONE, DATA, LIFE SAFETY SYSTEMS, SECURITY, ACCESS CONTROL AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND ENGINEER IN WRITING IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE OWNER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.

7. THESE DRAWINGS ARE COMPILED BY THE ENGINEER FROM THE OWNER'S RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL WIRING, CONDUIT, DIMENSIONS, POINTS OF ACCESS AND ALL FIELD CONDITIONS AFFECTING HIS WORK. BEGINNING OF DEMOLITION MEANS THE CONTRACTOR ACCEPTS EXISTING CONDITIONS.



NOTE:
DETAIL SHOWN FOR REFERENCE ONLY, NOT ALL DEVICES ARE INDICATED ON PLANS.

1 / F0.01 **Fire Alarm Devices - Mounting Height Detail**
Not To Scale



2 / F0.01 **Typical Ceiling Mounted Smoke Detector Mounting Detail**
Not To Scale

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

CBHF Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506

© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF

2–4–19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

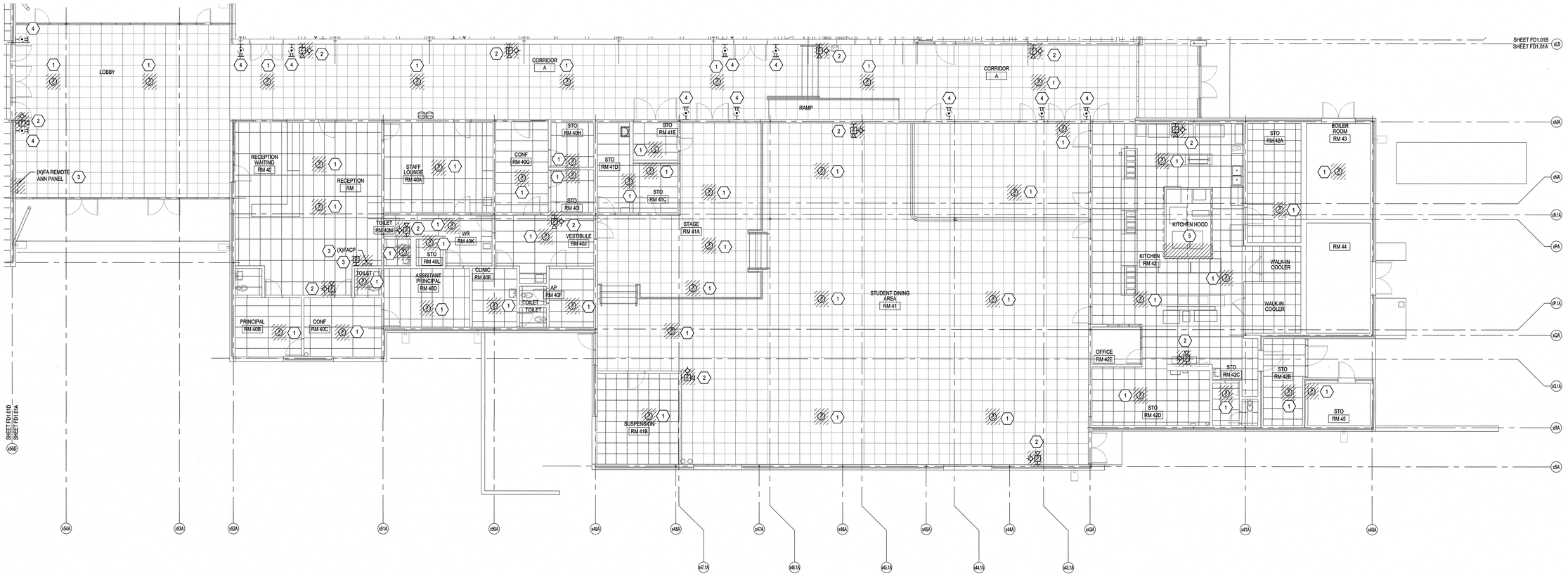
FIRE ALARM LEGEND, NOTES AND DETAILS

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER F0.01

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

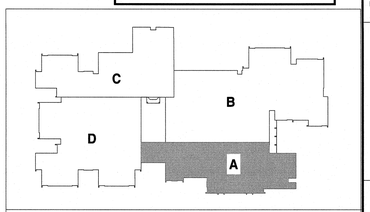


KEYED NOTES

1. CEILING MOUNTED SMOKE DETECTOR: REMOVE DETECTOR, REMOVE FA CABLE AND CONDUIT COMPLETE TO SOURCE.
2. WALL MOUNTED NOTIFICATION DEVICE (HORN/STROBE, STROBE): REMOVE NOTIFICATION DEVICE AND PROVIDE BLANK COVERPLATE, REMOVE FA CABLE AND EXPOSED CONDUIT COMPLETE TO SOURCE. CONCEALED CONDUIT SHALL REMAIN ABANDONED IN PLACE.
3. FIRE ALARM EQUIPMENT: REMOVE COMPLETE TO SOURCE AFTER NEW SYSTEM HAS BEEN ACCEPTED BY THE AHJ.
4. DOOR HOLD OPEN DEVICE: PROTECT IN PLACE DURING DEMOLITION AND CONSTRUCTION, DEVICE SHALL BE OPERATIONAL AFTER CONSTRUCTION COMPLETE.
5. KITCHEN HOOD: DISCONNECT HOOD CONTROL PANEL AND PROTECT DURING DEMOLITION AND CONSTRUCTION, DEVICE SHALL BE OPERATIONAL AFTER CONSTRUCTION COMPLETE.
6. BEAM DETECTOR & KILL SWITCH: DISCONNECT DEVICES AND PROTECT IN PLACE DURING DEMOLITION AND CONSTRUCTION, DEVICES SHALL BE OPERATIONAL AFTER CONSTRUCTION COMPLETE.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL	
2-HOUR RATED WALL	



KEY PLAN

TRUE PLAN NORTH

1 / FD1.01A **Demolition Fire Alarm Floor Plan - A**
scale: 1/8" = 1'-0"

0 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITON FIRE ALARM FLOOR PLAN - A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER FD1.01A

2-4-19

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER WILLIAM A. ALLEN, JR.
2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

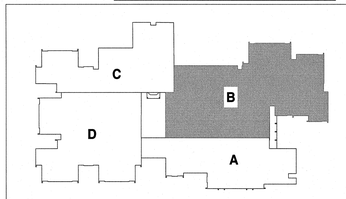


KEYED NOTES

1. CEILING MOUNTED SMOKE DETECTOR: REMOVE DETECTOR, REMOVE FA CABLE AND CONDUIT COMPLETE TO SOURCE.
2. WALL MOUNTED NOTIFICATION DEVICE (HORN/STROBE, STROBE), REMOVE NOTIFICATION DEVICE AND PROVIDE BLANK COVERPLATE, REMOVE FA CABLE AND EXPOSED CONDUIT COMPLETE TO SOURCE. CONCEALED CONDUIT SHALL REMAIN ABANDONED IN PLACE.
3. FIRE ALARM EQUIPMENT: NOT USED.
4. DOOR HOLD OPEN DEVICE: PROTECT IN PLACE DURING DEMOLITION AND CONSTRUCTION, DEVICE SHALL BE OPERATIONAL AFTER CONSTRUCTION COMPLETE.
5. KITCHEN HOOD: NOT USED.
6. BEAM DETECTOR & KILL SWITCH: DISCONNECT AND REMOVE DEVICES, REMOVE FA CABLE COMPLETE TO SOURCE, PROTECT CONDUIT IN PLACE FOR REUSE.
7. DOOR HOLD OPEN DEVICE: REMOVE DEVICE AND PROVIDE BLANK COVERPLATE, REMOVE FA CABLE COMPLETE TO SOURCE. CONCEALED CONDUIT SHALL REMAIN ABANDONED IN PLACE.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 FD1.01B **Demolition Fire Alarm Floor Plan - B**
scale: 1/8" = 1'-0"

0 4' 8' 16'
1/8" = 1'-0"

DEMOLITION FIRE ALARM FLOOR PLAN - B

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

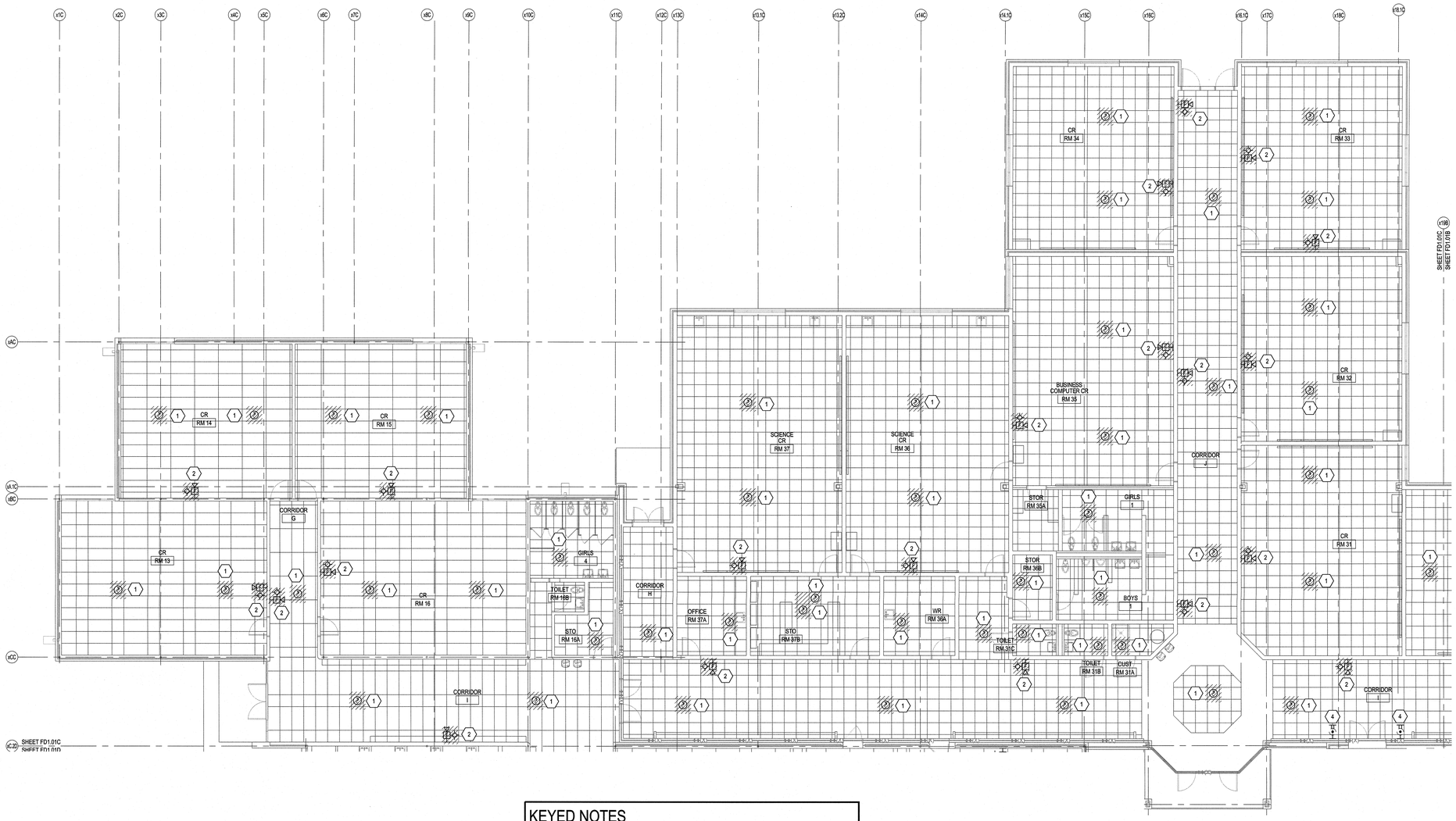
SHEET NUMBER FD1.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF

2-4-19

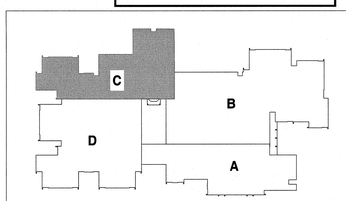


KEYED NOTES

1. CEILING MOUNTED SMOKE DETECTOR: REMOVE DETECTOR, REMOVE FA CABLE AND CONDUIT COMPLETE TO SOURCE.
2. WALL MOUNTED NOTIFICATION DEVICE (HORN/STROBE, STROBE), REMOVE NOTIFICATION DEVICE AND PROVIDE BLANK COVERPLATE. REMOVE FA CABLE AND EXPOSED CONDUIT COMPLETE TO SOURCE. CONCEALED CONDUIT SHALL REMAIN ABANDONED IN PLACE.
3. FIRE ALARM EQUIPMENT: PROTECT IN PLACE DURING DEMOLITION AND CONSTRUCTION.
4. DOOR HOLD OPEN DEVICE: NOT USED.
5. KITCHEN HOOD: NOT USED.
6. BEAM DETECTOR & KILL SWITCH: NOT USED.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 FD1.01C **Demolition Fire Alarm Floor Plan - C**
scale: 1/8" = 1'-0"

0 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION FIRE ALARM FLOOR PLAN - C

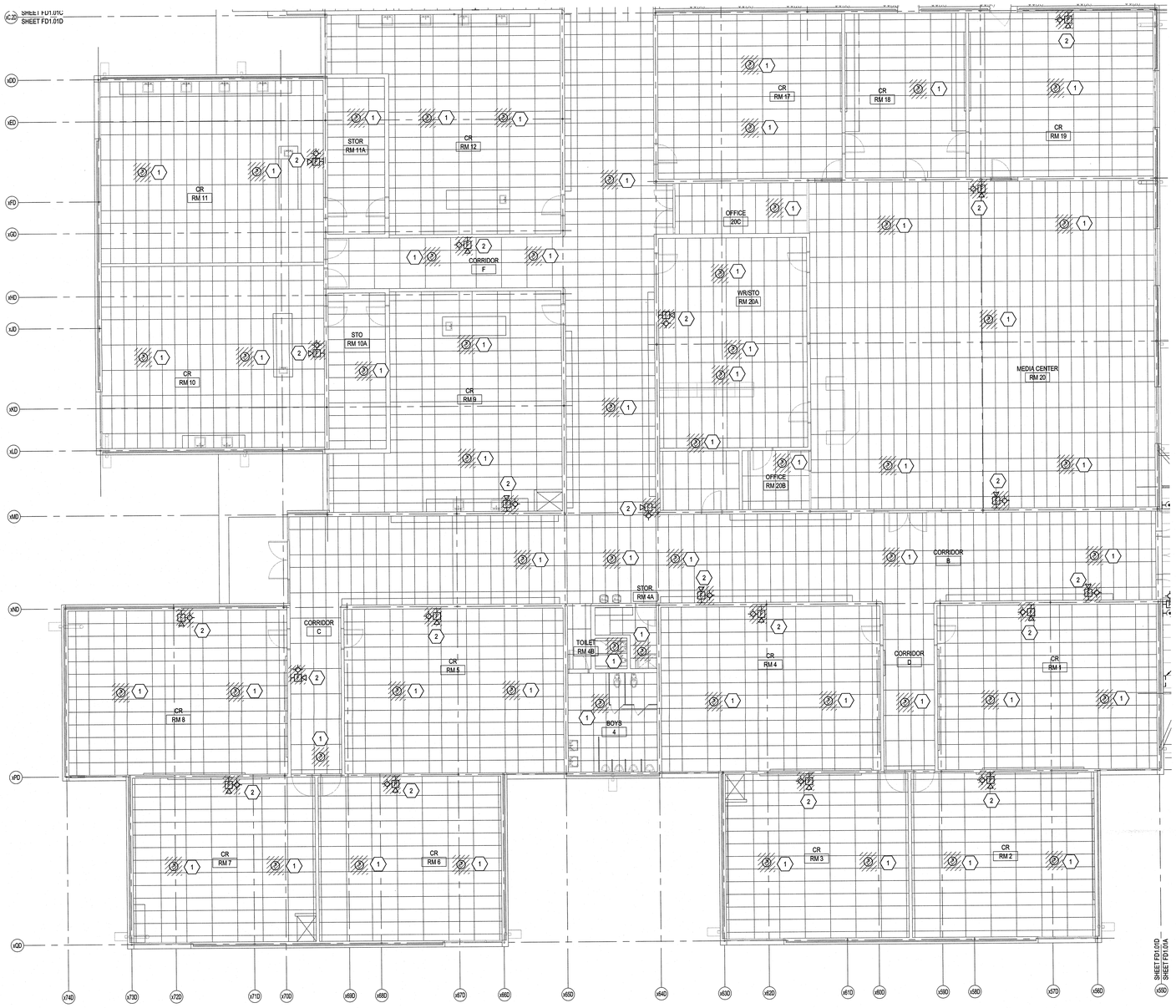
JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER FD1.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER ALLEN CRABTREE
2-4-19



KEYED NOTES

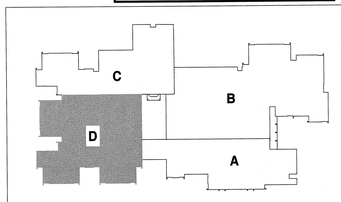
1. CEILING MOUNTED SMOKE DETECTOR: REMOVE DETECTOR, REMOVE FA CABLE AND CONDUIT COMPLETE TO SOURCE.
2. WALL MOUNTED NOTIFICATION DEVICE (HORN/STROBE, STROBE), REMOVE NOTIFICATION DEVICE AND PROVIDE BLANK COVERPLATE, REMOVE FA CABLE AND EXPOSED CONDUIT COMPLETE TO SOURCE. CONCEALED CONDUIT SHALL REMAIN ABANDONED IN PLACE.
3. FIRE ALARM EQUIPMENT: NOT USED.
4. DOOR HOLD OPEN DEVICE: NOT USED.
5. KITCHEN HOOD: NOT USED.
6. BEAM DETECTOR & KILL SWITCH: NOT USED.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

TRUE PLAN NORTH

1 / FD1.01D **Demolition Fire Alarm Floor Plan - D**
scale: 1/8" = 1'-0"
0 4' 8' 16' 1/8" = 1'-0"



KEY PLAN

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

DEMOLITION FIRE ALARM FLOOR PLAN - D

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER FD1.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF
2-4-19



KEYED NOTES

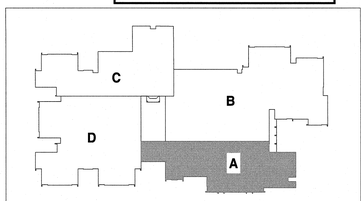
1. DOOR HOLD OPEN DEVICE: RECONNECT DEVICE PROTECTED DURING DEMOLITION, CONTRACTOR SHALL VERIFY DEVICE IS OPERATIONAL.
2. KITCHEN HOOD: RECONNECT HOOD CONTROL PANEL PROTECTED DURING DEMOLITION, CONTRACTOR SHALL VERIFY DEVICE IS OPERATIONAL.
3. TAMPER AND FLOW SWITCH: COORDINATE EXACT LOCATIONS OF DEVICES WITH SPRINKLER CONTRACTOR PRIOR TO ROUGH-IN AND INSTALLATION.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

TRUE PLAN NORTH

1 / F1.01A **Fire Alarm Floor Plan - A**
scale: 1/8" = 1'-0"
0' 4' 8' 16'
1/8" = 1'-0"



KEY PLAN

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

FIRE ALARM FLOOR PLAN-AREA A

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER F1.01A

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CBHF

2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

FIRE ALARM FLOOR PLAN-AREA B



KEYED NOTES

1. DOOR HOLD OPEN DEVICE: RECONNECT DEVICE PROTECTED DURING DEMOLITION, CONTRACTOR SHALL VERIFY DEVICE IS OPERATIONAL.

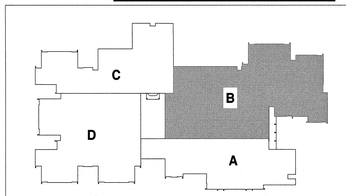
FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL

TRUE PLAN NORTH

1 / F1.01B **Fire Alarm Floor Plan - B**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"



KEY PLAN

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER F1.01B

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

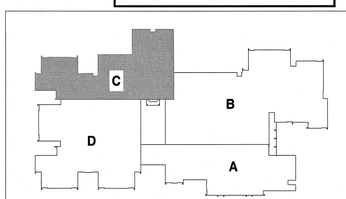


KEYED NOTES

1. DOOR HOLD OPEN DEVICE: RECONNECT DEVICE PROTECTED DURING DEMOLITION, CONTRACTOR SHALL VERIFY DEVICE IS OPERATIONAL.

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL
2-HOUR RATED WALL



KEY PLAN

TRUE PLAN NORTH

1 / F1.01C **Fire Alarm Floor Plan - C**
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

WILLIAM A. CROSS
REGISTERED ARCHITECT
SEAL
023311
ENGINEER
W. ALLEN CRISP

2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

FIRE ALARM FLOOR PLAN-AREA C

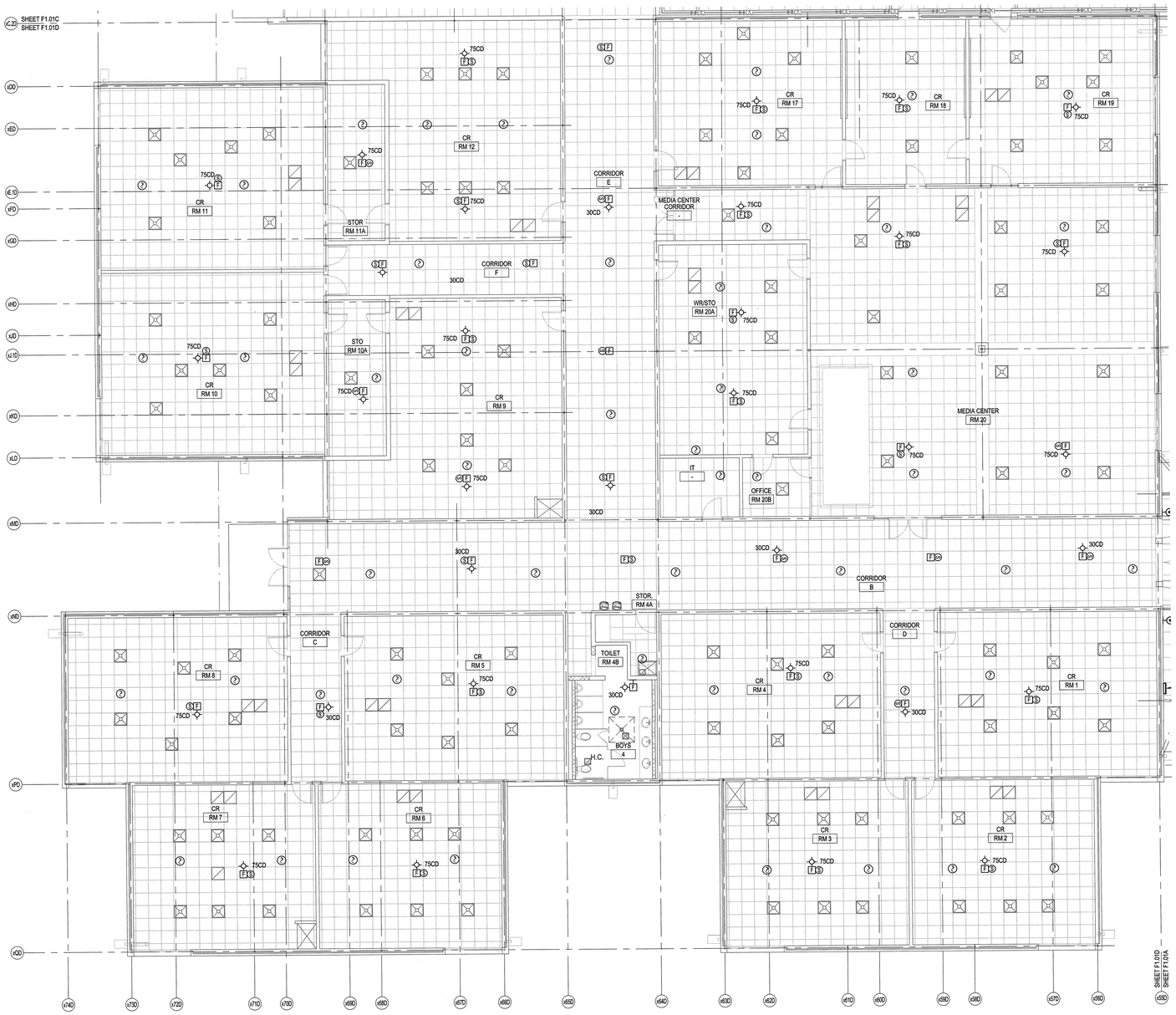
JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER F1.01C

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC

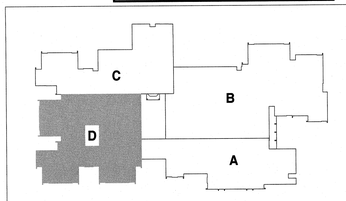
BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER ALLEN CERTIFIED
2-4-19



FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL	
2-HOUR RATED WALL	



KEY PLAN

TRUE PLAN NORTH

F1.01D Fire Alarm Floor Plan - D
scale: 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1'-0"

Renovations to: M.C.S. Noble Middle School

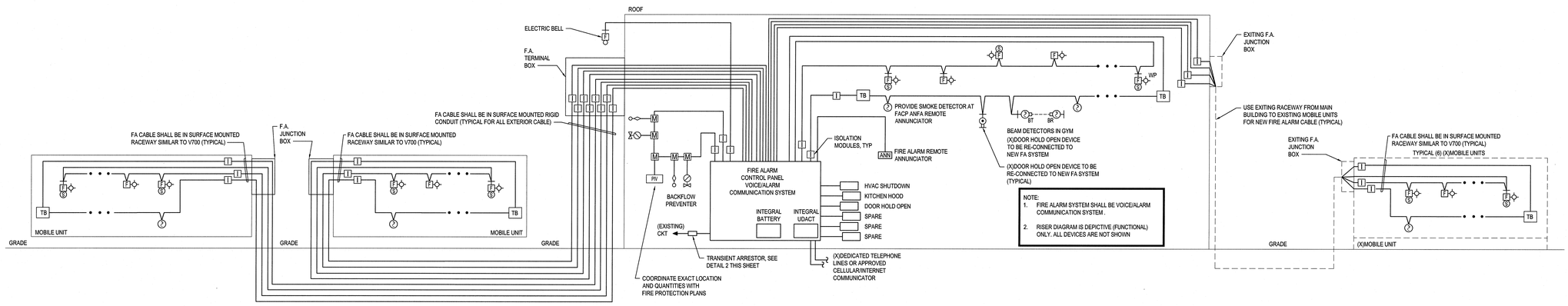
6520 Market Street
Wilmington, North Carolina 28405

FIRE ALARM FLOOR PLAN-AREA D

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER F1.01D

CBHF
Engineers, PLLC
2246 Yaupon Drive
Wilmington, NC 28401
Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NC# P-0506
© Copyright 2018 CBHF Engineers, PLLC



1 / F6.01 **Fire Alarm Riser Diagram**
Not To Scale

NOTES:
SECURELY MOUNT TRANSIENT ARRESTOR IN ACCESSIBLE JUNCTION BOX OR PROPER METAL ENCLOSURE ADJACENT TO THE PANELBOARD. PROVIDE ENGRAVED LABEL INDICATING ITS LOCATION

2 / F6.01 **Transient Arrestor Installation Detail**
Not To Scale

FIRE WALL LEGEND

EXISTING 2-HOUR RATED WALL	⊢(X)⊣
2-HOUR RATED WALL	⊢⊣

BOWMAN MURRAY HEMINGWAY
ARCHITECTS
514 Market Street
Wilmington, NC 28401
Tel - (910) 762-2621
Fax - (910) 762-8506

SEAL 023311 ENGINEER W. ALLEN CRUM

2-4-19

Renovations to: M.C.S. Noble Middle School

6520 Market Street
Wilmington, North Carolina 28405

FIRE ALARM RISER DIAGRAM

JOB NUMBER 18005
DRAWN BY HGH
CHECKED BY WAC
DATE 02-04-2019
REVISIONS

SHEET NUMBER F6.01