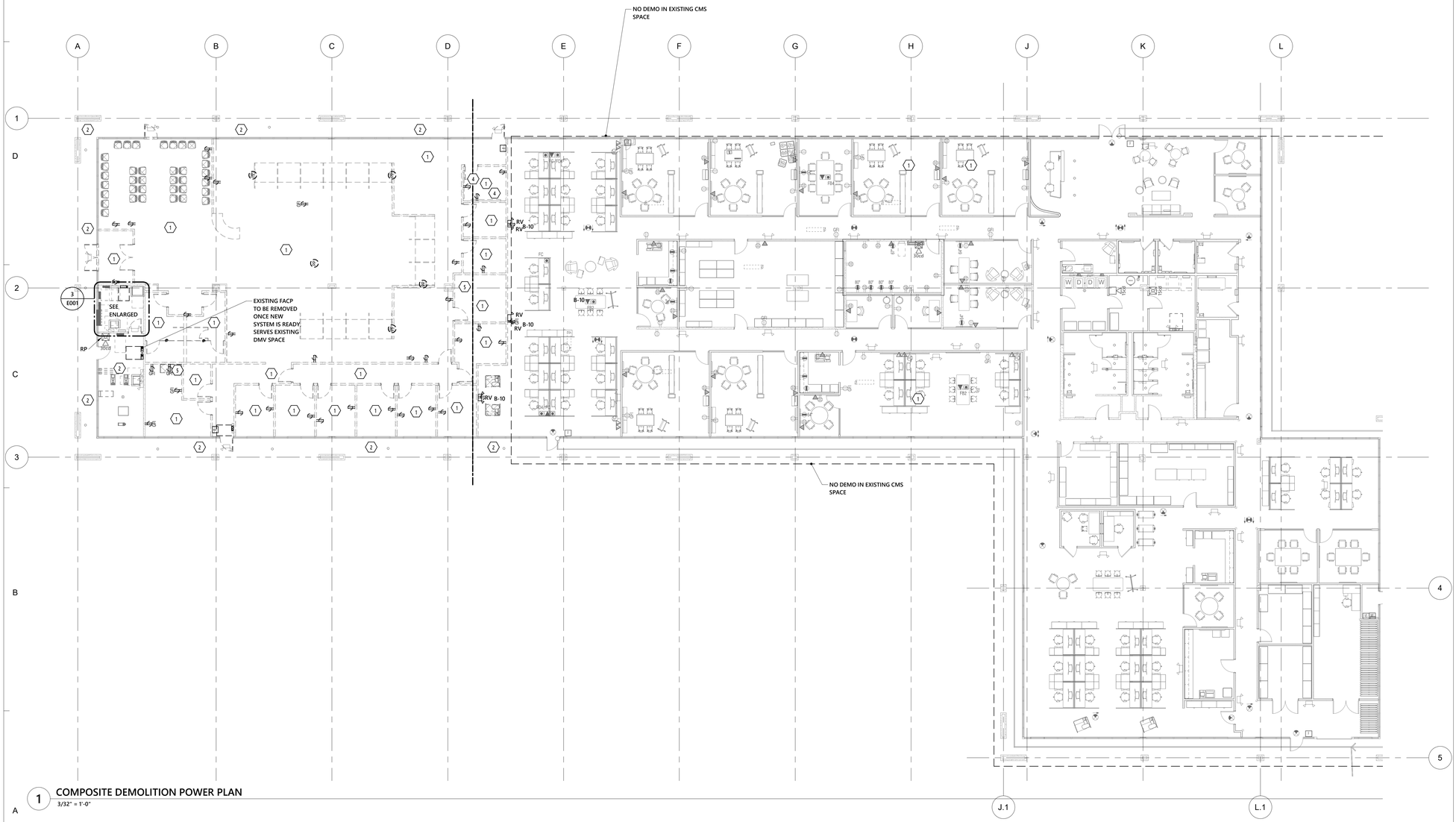


3 DEMOLITION ENLARGED POWER PLAN
1/4" = 1'-0"



1 COMPOSITE DEMOLITION POWER PLAN
3/32" = 1'-0"

GENERAL NOTES DEMO (ALL DEMO SHEETS):

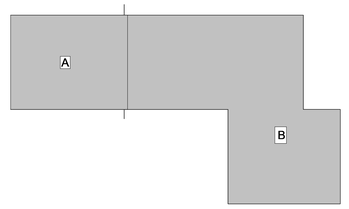
A. THE EXTENT OF THE ELECTRICAL DEMOLITION WORK IS INDICATED HEREIN.
B. CONTRACTOR SHALL SUBMIT THEIR PLAN TO WORK OUTSIDE THE WORK AREAS TO THE OWNER PRIOR TO ENTERING THOSE AREAS.
C. PARTIAL AND TOTAL DEMOLITION OF PORTIONS SHALL BE PERFORMED ALONG WITH ALL NECESSARY MODIFICATIONS TO THAT PORTION OF THE EXISTING BUILDING WHICH SHALL REMAIN SO THAT IT CONTINUES TO FUNCTION UNAFFECTED BY THE DEMOLITION AND ASSOCIATED NEW CONSTRUCTION. THE DRAWINGS INDICATE THE GENERAL AREAS OF WORK INVOLVED. HOWEVER, THE CONTRACTOR SHALL PERFORM WORK OUTSIDE THOSE AREAS SHOWN AS IS NECESSARY TO COMPLY WITH THE INTENT OF THIS SECTION.
D. THE CONTRACTOR SHALL FAMILIARIZE THEMSELF WITH THE EXISTING BUILDING AND WITH THE WORK OF ALL OTHER TRADES AND INCLUDE ALL WORK NECESSARY TO COMPLY WITH THE INTENT OF THE DEMOLITION. IT SHALL BE UNDERSTOOD THAT FIELD CONDITIONS MAY BE ENCOUNTERED DURING THE EXECUTION OF THIS CONTRACT WHICH WILL REQUIRE EXTENSION OR RELOCATION OF EXISTING SYSTEMS OR EQUIPMENT WHICH ARE NOT SPECIFICALLY SHOWN ON THE DRAWINGS BUT, WHICH ARE REQUIRED TO MEET THE STATED INTENT THAT THE BUILDING CONTINUE TO FUNCTION UNAFFECTED BY THE DEMOLITION AND ASSOCIATED NEW CONSTRUCTION.
E. THIS CONTRACT SHALL INCLUDE SUCH WORK AS WOULD NORMALLY BE EXPECTED IN AN EXISTING BUILDING OF THIS AGE AND TYPE. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TOOLS, EQUIPMENT, LABOR, ETC. IN ORDER TO ACCOMPLISH THE DEMOLITION PORTION OF THE CONTRACT DRAWINGS. THE DEMOLITION OF CERTAIN AREAS OF THE EXISTING BUILDING SHALL BE SHALL BE PERFORMED BY THE GENERAL CONTRACTOR.
F. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE G.C. TO DIFFERENTIATE THE SCOPE OF WORK BETWEEN SEPARATE TRADES. THE ELECTRICAL CONTRACTOR SHALL INCLUDE COORDINATION WITH THE GENERAL CONTRACTOR AND SUCH DEMOLITION OF THE EXISTING ELECTRICAL SYSTEM AS IS NECESSARY SO THAT THE DEMOLITION WORK OF THE GENERAL CONTRACTOR SHALL NOT DAMAGE THOSE PORTIONS OF THE ELECTRICAL SYSTEMS WHICH ARE TO REMAIN IN SERVICE, ARE TO BE REUSED, OR ARE TO BECOME THE PROPERTY OF THE OWNER.
G. TURN OVER TO OWNER, UPON REQUEST, ITEMS SHOWN AS BEING REMOVED AND NOT REINSTALLED. ITEMS NOT DIRECTED OR REQUESTED TO BE TURNED OVER TO THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR. EQUIPMENT OR MATERIALS WHICH ARE TO BE REUSED ORTURNED OVER TO THE OWNER SHALL BE CAREFULLY REMOVED, CLEANED, AND STORED IN A CLEAN AND DRY AREA. SHOULD THE CONTRACTOR ENCOUNTER SUCH EQUIPMENT WHICH IS NOT IN SATISFACTORY CONDITION OR REUSE AND NOT IN WORKING ORDER, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY.
H. DISCONNECT ELECTRICAL SERVICES TO ALL EQUIPMENT REQUIRING REMOVAL. CONDUIT SHALL BE REMOVED BACK TO THE POINT WHERE IT WILL BE CONCEALED AT THE COMPLETION OF THIS CONTRACT. WIRE AND CABLE SHALL BE REMOVED BACK TO THE FIRST OUTLET BOX, CABINET, OR TERMINATION POINT WHICH IS TO REMAIN.CIRCUITS WHICH ARE NOT REUSED SHALL BE REMOVED BACK TO THE SOURCE. BREAKER SHALL BE SET TO THE OFF POSITION AND SHALL HAVE AN UPDATED TYPED SCHEDULE AS "SPARE". INCLUDE MARKINGS TO VISUALLY INDICATE LIVE ELECTRICAL ITEMS THAT ARE LEFT IN THE BUILDING DURING CONSTRUCTION.
I. REMOVE AND REINSTALL CEILINGS IN EXISTING BUILDING AS REQUIRED FOR THE WORK. COORDINATE WITH THE GENERAL CONTRACTOR. IN SUCH AREAS, REMOVE AND REINSTALL ALL ELECTRICAL DEVICES WHICH ARE TO REMAIN IN OR ON THE CEILING. WHERE NEW CEILINGS CONFLICT WITH EXISTING ELECTRICAL WORK WHICH IS TO REMAIN, RELOCATE THE ELECTRICAL WORK INVOLVED TO CLEAR THE NEW CONSTRUCTION.
J. WHERE NEW WALL OR FLOOR FINISHES CONFLICT WITH EXISTING ELECTRICAL WORK WHICH IS TO REMAIN, RELOCATE THE ELECTRICAL WORK INVOLVED OR PROVIDE BOX EXTENSIONS OR SIMILAR DEVICES AND REINSTALL ON THE NEW FINISH.
K. WHERE EXISTING BRANCH CIRCUITS AND SYSTEMS ARE INTERRUPTED BY DEMOLITION NEW WORK, OR NEW MECHANICAL DUCTWORK, EXTEND AND RECONNECT THOSE CIRCUITS AND SYSTEMS. WHERE THOSE CIRCUITS OR SYSTEMS MUST REMAIN IN SERVICE DURING THE EXECUTION OF THIS CONTRACT, PROVIDE TEMPORARY CONNECTIONS UNTIL FINAL CONNECTIONS ARE COMPLETE.
L. ALL DEMOLITION OF TELECOM CABLING SHALL BE BY THE TELECOM CONTRACTOR.
M. CONTRACTOR SHALL IDENTIFY ANY CONCERNS WITH THE EXISTING SYSTEMS AND EQUIPMENT PRIOR TO DEMO/WORK.
N. WALL DASHED LINES DENOTE EXISTING WALLS TO REMAIN. UNLESS TAGGED OTHERWISE.
O. CONTRACTOR SHALL IDENTIFY ANY CONCERNS WITH THE EXISTING SYSTEMS AND EQUIPMENT PRIOR TO DEMO/WORK.
P. UNUSED ABANDONED CABLING SHALL BE REMOVED. RE-SUPPORT CABLING ABOVE CEILING WHERE REQUIRED BY CODE. THIS SHALL INCLUDE ALL CABLING EXPOSED AND IN CONDUIT, FIRE ALARM, DATA, SECURITY, AND INTERCOM. CABLING FOR THE DMV SHALL REMAIN.

KEYED NOTES:

1. REMOVE ALL DEVICES IN THIS AREA. CONDUIT SHALL BE REMOVED BACK TO THE LOCAL JUNCTION BOX ABOVE THE ACCESSIBLE CEILING. MC CABLE SHALL BE REMOVED IN ENTIRETY. DEVICES SHOWN ARE TO BE REMOVED. WORK SHALL BE A COMPLETE REMOVAL OF DEVICES BOTH SHOWN AND HIDDEN.
2. EXISTING EQUIPMENT TO REMAIN IN THIS AREA UNLESS OTHERWISE NOTED. DEMO ALL EXISTING ABANDONED CONDUIT AND MC CABLING.
3. EXISTING PANEL 'C' TO BE REPLACED.
4. DEMO EXISTING WALL MOUNTED EQUIPMENT.
5. DEMO EXISTING WATERHEATER ELECTRICAL CONNECTIONS AND CIRCUIT.

RV - DEVICE TO BE REMOVED.
RP - DEVICE TO BE REPLACE.
RM - DEVICE TO REMAIN.

KEYPLAN



Ref North

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Phone: 704.338.1292 • www.optimaengineering.com
North Carolina License Number C-0914

NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
06.16.2025

ISSUE FOR:
CONSTRUCTION

ISSUE DATE:
06.16.2025

REVISIONS:

NO.	REASON	DATE

PROJECT TEAM:
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME:
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO:
1641630004

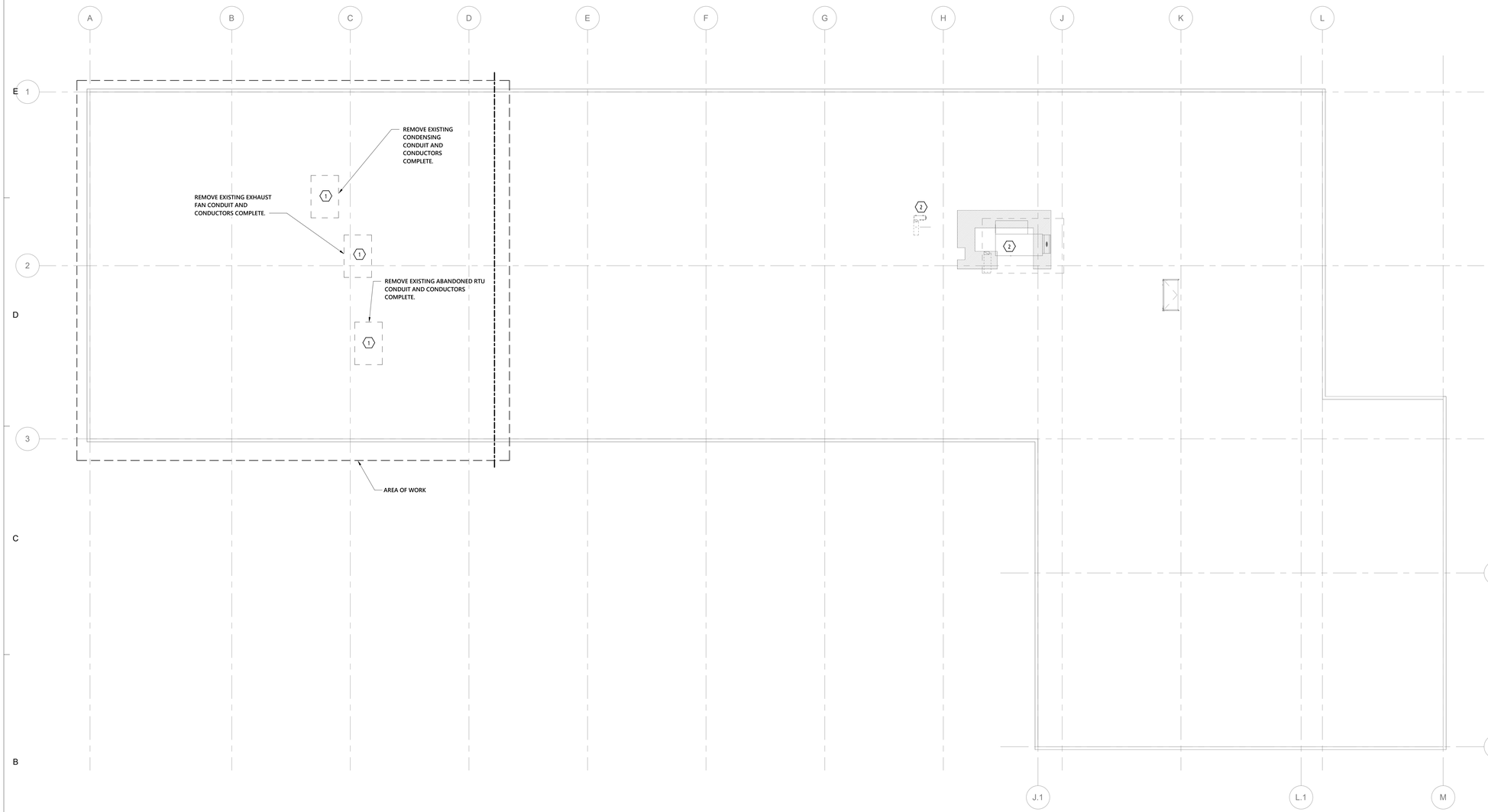
SHEET TITLE:
COMPOSITE DEMOLITION FLOOR PLAN

SHEET NUMBER:
E001

Optima Project # 22-0013

6/13/2025 2:42:18 PM

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1 COMPOSITE DEMOLITION MECHANICAL ROOF PLAN

3/32" = 1'-0"

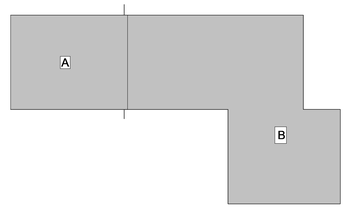
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KEYED NOTES:

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2. EXISTING MECHANICAL EQUIPMENT TO REMAIN.

KEYPLAN



Ref North

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North Carolina License Number C-0914

NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
06.16.2025

ISSUE FOR
CONSTRUCTION

ISSUE DATE
06.16.2025

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO.
1641630004

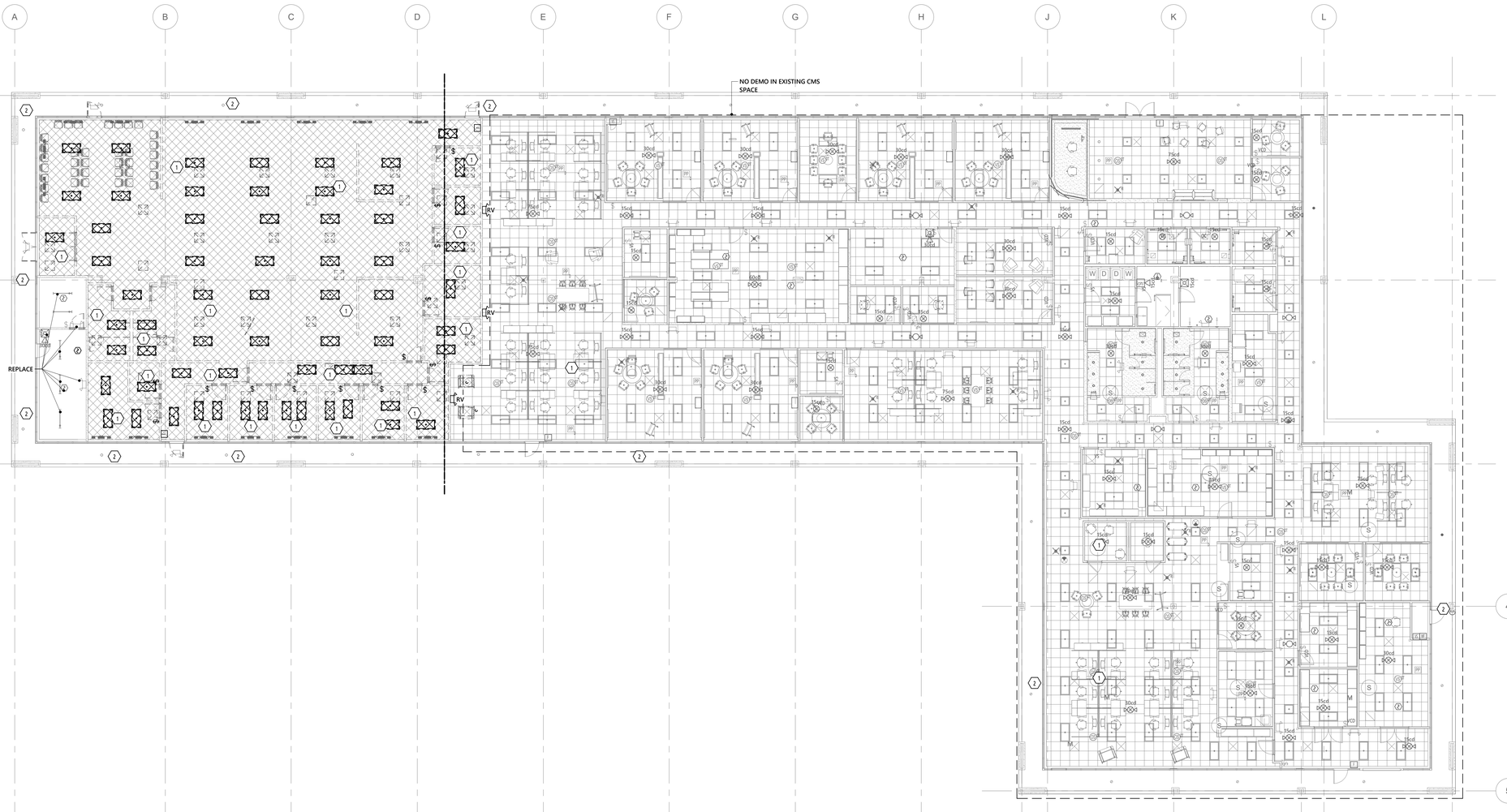
SHEET TITLE
COMPOSITE DEMOLITION FLOOR PLAN - ROOF

SHEET NUMBER
E002

Optima Project # 22-0013

6/13/2025 2:42:19 PM

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1 COMPOSIGTE DEMOLITION LIGHTING REFLECTED CEILING PLAN

3/32" = 1'-0"

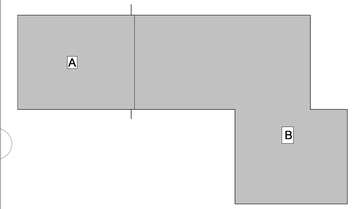
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P. UNUSED ABANDONED CABLING SHALL BE REMOVED. RE-SUPPORT CABLING ABOVE CEILING WHERE REQUIRED BY CODE.

KEYED NOTES:

1. DEMO EXISTING LIGHT FIXTURES AND LIGHTING DEVICES IN THIS AREA. CONDUIT SHALL BE REMOVED BACK TO THE LOCAL JUNCTION BOX ABOVE THE ACCESSIBLE CEILING. MC CABLE SHALL BE REMOVED IN ENTIRETY. DEVICES SHOWN ARE TO BE REMOVED. WORK SHALL BE A COMPLETE REMOVAL OF DEVICES BOTH SHOWN AND HIDDEN.
2. EXISTING LIGHTING TO REMAIN IN THIS AREA. EXISTING DEVICES TO REMAIN UNLESS OTHERWISE NOTED. DEMO ALL EXISTING ABANDONED CONDUIT AND MC CABLING.

KEYPLAN



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NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
06.16.2025

ISSUE FOR:
CONSTRUCTION

ISSUE DATE:
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REVISIONS:

NO.	REASON	DATE

PROJECT TEAM:
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME:
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO:
1641630004

SHEET TITLE:
COMPOSITE DEMOLITION RCP PLAN

SHEET NUMBER:
E003

Optima Project # 22-0013

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SYMBOLS:

SYMBOL	DESCRIPTION
	LADDER STYLE CABLE TRAY 12"X WIDE BY 4" DEEP (9" RUNG SPACING) 1. 12" CABLE TRAYS WITH 1 DIVIDER ARE TO BE PROVIDED. THE TRAY SHALL BE DIVIDED IN A 8" SECTION AND A 4" SECTION. 2. E.C. TO COORDINATE WITH TELECOM CONTRACTOR AND ALL OTHER DISCIPLINES WITH THEIR WORK IN THE LOCATION OF THE CABLE TRAYS PRIOR TO INSTALLATION. 3. A MINIMUM OF 12" CLEARANCE ABOVE THE TRAY AND 36" CLEARANCE TO ACCESS THE TRAY FROM ONE SIDE IS REQUIRED AT ALL TIMES. A. WATER PIPING IS NOT ALLOWED TO ROUTE ABOVE THE TRAY. IF THIS IS UNAVOIDABLE DUE TO THE CONSTRAINTS OF THE CEILING SPACE, A DRIP PAN WITH INSTALLED DRAINS MUST BE INSTALLED UNDER THE PIPING IN ORDER TO PROTECT THE CABLES FROM WATER DAMAGE. • THIS REQUIREMENT WILL NOT BE REQUIRED WHERE THERE ARE NO JOINTS IN BRANCH PIPING LESS THAN 2" IN DIAMETER THAT DO NOT HAVE ANY JOINTS IN THE PIPES 2' FROM THE TOP OF THE CABLE TRAY DIMENSIONING FROM EACH SIDE OF THE TRAY. B. THE DATA, VOICE, AND WIRELESS CABLES SHALL OCCUPY THE LARGER SECTION OF THE PARTITIONED CABLE TRAY. C. INTERCOM, VIDEO SURVEILLANCE, ACCESS CONTROLS AND INTRUSION CABLES SHALL OCCUPY THE SMALLER SECTION OF THE PARTITIONED CABLE TRAY. D. MECHANICAL CONTROLS CABLE SHALL NOT BE INSTALLED IN THE CABLE TRAY, NOR BE SUPPORTED BY THE CABLE TRAY OR THE CABLE TRAY SUPPORTS. E. ELECTRICAL CONDUCTORS ARE NOT ALLOWED TO BE ROUTED IN THE TRAY OR BE SUPPORTED BY THE CABLE TRAY. THEY SHALL NOT BE ROUTED PARALLEL WITHIN 12" OF THE TRAY DUE TO SUSCEPTIBILITY OF EMI. F. DUCT WORK AND MECHANICAL PIPING SHALL NOT OBSTRUCT THE TRAY AND MUST LEAVE THE TRAY ACCESSIBLE THROUGHOUT ITS ROUTING.

FLOOR BOXES:

DESCRIPTION	
FB4	4-GANG MULTI-SERVICE FLOOR BOX. ELECTRICAL CONTRACTOR SHALL PROVIDE FLOOR BOX, COVER, CONDUITS, ELECTRICAL DEVICES AND ASSOCIATED MOUNTING PLATES FOR A COMPLETE INSTALLATION. STRUCTURED CABLING CONTRACTOR SHALL PROVIDE QUANTITY OF CATEGORY 6 CABLES AS INDICATED BY SUBSCRIPT. LEGRAND: EVOLUTION EFB45S-OG OR APPROVED EQUAL. REFER TO T601/DETAIL #2 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
FD2	2-GANG DATA-SERVICE FLOOR BOX. ELECTRICAL CONTRACTOR SHALL PROVIDE FLOOR BOX, COVER, CONDUITS AND ASSOCIATED MOUNTING PLATES FOR A COMPLETE INSTALLATION. STRUCTURED CABLING CONTRACTOR SHALL PROVIDE QUANTITY OF CATEGORY 6 CABLES AS INDICATED BY SUBSCRIPT. LEGRAND: EVOLUTION EFB45S-OG OR APPROVED EQUAL. REFER TO T601/DETAIL #3 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
FC	(2)-GANG POWER ONLY FURNITURE FLOORBOX. BASED ON LEGRAND RFBA2-OG WITH FURNITURE FEED COVER. PROVIDE 90 DEGREE CONNECTOR FOR FURNITURE WHIP. SEE PLANS FOR CONDUIT AND WIRE SIZE REQUIRED.

ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)	DCP	DOMESTIC WATER CIRCULATING PUMP	HT	HEIGHT	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	SWBD	SWITCHBOARD
				HTG	HEATING			SYM	SYMMETRICAL
A	AMPERE	DEPT	DEPARTMENT	HTR	HEATER			SYS	SYSTEM
AC	ABOVE COUNTER OR AIR CONDITIONER	DET	DETAIL	HV	HIGH VOLTAGE	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH	TEL	TELEPHONE
		DIA	DIAMETER	HVAC	HEATING, VENTILATING AND AIR CONDITIONING			TEL/DATA	TELEPHONE/DATA
ACLG	ABOVE CEILING	DISC	DISCONNECT			NIC	NOT IN CONTRACT	TERM	TERMINAL
ADO	AUTOMATIC DOOR OPENER	DIST	DISTRIBUTION	HWP	HYDRONIC WATER PUMP	NL	NIGHT LIGHT	TL	TWIST LOCK
AF	AMP FRAME	DN	DOWN			N.O.	NORMALLY OPEN	TR	TAMPER RESISTANT
AFF	ABOVE FINISHED FLOOR	DPR	DAMPER	IC	INTERRUPTING CAPACITY	NPF	NORMAL POWER FACTOR	T-STAT	THERMOSTAT
AFG	ABOVE FINISHED GRADE	DS	SAFETY DISCONNECT SWITCH	IG	ISOLATED GROUND	NTS	NOT TO SCALE	TTC	TELEPHONE TERMINAL CABINET
AFI	ARC FAULT CIRCUIT INTERRUPTER	DT	DOUBLE THROW	IMC	INTERMEDIATE METAL CONDUIT				
		DWG	DRAWING	INCAND	INCANDESCENT	OH	OVERHEAD	TV	TELEVISION
AHU	AIR HANDLING UNIT			IR	INFRARED	OL	OVERLOADS	TVTC	TELEVISION TERMINAL CABINET
AL	ALUMINUM	EC	ELECTRICAL CONTRACTOR	I/W	INTERLOCK WITH				
ALT	ALTERNATE	ELEC	ELECTRIC, ELECTRICAL			PA	PUBLIC ADDRESS	TYP	TYPICAL
AMP	AMPERE	ELEV	ELEVATOR	J-BOX	JUNCTION BOX	PB	PULL BOX OR PUSHBUTTON		
AMPL	AMPLIFIER	EM	EMERGENCY			PE	PNEUMATIC ELECTRIC	UC	UNDER COUNTER
ANNUN	ANNUNCIATOR	EMS	ENERGY MANAGEMENT SYSTEM	KV	KILOVOLT	PED	PEDESTAL	UE	UNDERGROUND ELECTRICAL
APPROX	APPROXIMATELY	EMT	ELECTRICAL METALLIC TUBING	KVA	KILOVOLT-AMPERE	PF	POWER FACTOR	UG	UNDERGROUND
AQ-STAT	AQUASTAT	EP	ELECTRIC PNEUMATIC	KVAR	KILOVOLT-AMPERE REACTIVE	PH	PHASE	UH	UNIT HEATER
ARCH	ARCHITECT, ARCHITECTURAL	EQUIP	EQUIPMENT	KW	KILOWATT	PIV	POST INDICATING VALVE	UT	UNDERGROUND TELEPHONE
AS	AMP SWITCH	EWC	ELECTRIC WATER COOLER	KWH	KILOWATT HOUR	PNL	PANEL	UTIL	UTILITY
AT	AMP TRIP	EXIST	EXISTING			PP	POWER POLE	UV	UNIT VENTILATOR OR ULTRAVIOLET
ATS	AUTOMATIC TRANSFER SWITCH	EXH	EXHAUST	LOC	LOCATE OR LOCATION	PR	PAIR		
AUTO	AUTOMATIC	EXP	EXPLOSION PROOF	LT	LIGHT	PRI	PRIMARY		
AUX	AUXILIARY			LTG	LIGHTING	PROJ	PROJECTION	V	VOLT
AV	AUDIO VISUAL	FA	FIRE ALARM	LTNG	LIGHTNING	PRV	POWER ROOF VENTILATOR	VA	VOLT-AMPERES
AWG	AMERICAN WIRE GAUGE	FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL	LV	LOW VOLTAGE	PT	POTENTIAL TRANSFORMER	VDT	VIDEO DISPLAY TERMINAL
						PVC	POLYVINYL CHLORIDE (CONDUIT)	VERT	VERTICAL
BATT	BATTERY	FACP	FIRE ALARM CONTROL PANEL	MAX	MAXIMUM			VFD	VARIABLE FREQUENCY DRIVE
BD	BOARD	FCU	FAN COIL UNIT	MAG.S	MAGNETIC STARTER	PWR	POWER	VOL	VOLUME
BLDG	BUILDING	FIXT	FIXTURE	M/C	MOMENTARY CONTACT				
BMS	BUILDING MANAGEMENT SYSTEM	FLR	FLOOR	MC	MECHANICAL CONTRACTOR	QUAN	QUANTITY	W	WATT
		FLUOR	FLUORESCENT	MCB	MAIN CIRCUIT BREAKER			W/	WITH
		FU	FUSE	MCC	MOTOR CONTROL CENTER	RCPT	RECEPTACLE	WG	WIRE GUARD
C	CONDUIT	FUDS	FUSED SAFETY DISCONNECT SWITCH	MDC	MAIN DISTRIBUTION CENTER	REQD	REQUIRED	WH	WATER HEATER
CAB	CABINET			MDP	MAIN DISTRIBUTION PANEL	RM	ROOM	W/O	WITHOUT
CAT	CATALOG			MFR	MANUFACTURER	RSC	RIGID STEEL CONDUIT	WP	WEATHERPROOF
CATV	CABLE TELEVISION	GA	GAUGE	MFS	MAIN FUSED DISCONNECT SWITCH	RTU	ROOF TOP UNIT		
CB	CIRCUIT BREAKER	GAL	GALLON					XFMR	TRANSFORMER
CCTV	CLOSED CIRCUIT TELEVISION	GALV	GALVANIZED	MH	MANHOLE	SC	SURFACE CONDUIT	XFR	TRANSFER
CKT	CIRCUIT	GC	GENERAL CONTRACTOR	MIC	MICROPHONE	SEC	SECONDARY		
CLG	CEILING	GEN	GENERATOR	MIN	MINIMUM	SHT	SHEET		
COMB	COMBINATION	GFI	GROUND FAULT CIRCUIT INTERRUPTER	MISC	MISCELLANEOUS	SIM	SIMILAR		
CMPR	COMPRESSOR			MLO	MAIN LUGS ONLY	S/N	SOLID NEUTRAL		
CONN	CONNECTION	GFP	GROUND FAULT PROTECTOR	MMS	MANUAL MOTOR STARTER	SPEC	SPECIFICATION		
CONST	CONSTRUCTION	GND	GROUND	MOA	MULTIOUTLET ASSEMBLY	SPKR	SPEAKER		
CONT	CONTINUATION OR CONTINUOUS	GRS	GALVANIZED RIGID STEEL (CONDUIT)	MSP	MOTOR STARTER PANELBOARD	SP	SPARE	@	ANGLE
				MSBD	MAIN SWITCHBOARD	SR	SURFACE RACEWAY	@	AT
CONTR	CONTRACTOR	GYP BD	GYPSUM BOARD	MT	MOUNT	SS	STAINLESS STEEL	△	DELTA
CONV	CONVECTOR			MT.C	EMPTY CONDUIT	SSW	SELECTOR SWITCH	'	FEET
CP	CIRCULATING PUMP	HOA	HANDS-OFF-AUTOMATIC SWITCH	MTS	MANUAL TRANSFER SWITCH	S/S	STOP/START PUSHBUTTONS	"	INCHES
CRT	CATHODE-RAY TUBE			MTR	MOTOR, MOTORIZED	STA	STATION	#	NUMBER
CT	CURRENT TRANSFORMER	HORIZ	HORIZONTAL			STD	STANDARD	Ø	PHASE
CTR	CENTER	HP	HORSEPOWER	N.C.	NORMALLY CLOSED	SURF	SURFACE MOUNTED	C	CENTER LINE
CU	COPPER	HPF	HIGH POWER FACTOR	NEC	NATIONAL ELECTRICAL CODE	SW	SWITCH	P	PLATE

2018 NORTH CAROLINA ENERGY CONSERVATION CODE

COMMERCIAL ENERGY EFFICIENCY - ELECTRICAL SUMMARY

C401 METHOD OF COMPLIANCE

- ■ 2018 NCECC CHAPTER 4
- ☐ NC SPECIFIC COMCHECK PROVIDED
- ☐ N/A BASED ON PROJECT SCOPE
- ☐ ASHRAE 90.1-2013

C406 ADDITIONAL EFFICIENCY PACKAGE OPTIONS

- ☐ C406.2 EFFICIENT MECH EQUIPMENT
- ☐ C406.5 ON-SITE RENEWABLE ENERGY
- ■ C406.3 REDUCED LTG DENSITY
- ☐ C406.6 DEDICATED OA SYSTEM
- ☐ C406.4 ENHANCED DIGITAL LTG CNTLS
- ☐ C406.7 HI-EFF SERVICE WTR HTG
- ☐ NOT APPLICABLE BASED ON PROJECT SCOPE
- ☐ C406.7.1 WTR HTG LOAD FRACTION

C405.2 - LIGHTING CONTROLS (MANDATORY REQUIREMENTS):

- ■ LIGHTING SYSTEMS ARE PROVIDED WITH CONTROLS AS REQUIRED PER SECTION C405.2, EXCEPT WHERE EXEMPT.
- ☐ NOT APPLICABLE

C405.3 - EXIT SIGNS (MANDATORY REQUIREMENTS):

- ■ INTERNALLY ILLUMINATED EXIT SIGNS DO NOT EXCEED 5 WATTS PER SIDE.
- ☐ NOT APPLICABLE

C405.4 - INTERIOR LIGHTING POWER REQUIREMENTS (PRESCRIPTIVE) (NON-EXEMPT):

- ☐ NOT APPLICABLE PER 2018 NCECC C503.1, EXCEPTION 2.G.

C405.4.1 - TOTAL CONNECTED INTERIOR LIGHTING POWER:
3,200 WATTS SPECIFIED
51 % REDUCTION OF SPECIFIED VS. ALLOWED (APPLICABLE IF C406.1.2 IS SELECTED)

C405.4.2 - TOTAL ALLOWABLE INTERIOR LIGHTING POWER:
METHOD OF COMPLIANCE:

- ■ BUILDING AREA METHOD
- ☐ SPACE-BY-SPACE METHOD

7911 WATTS ALLOWED

C405.5.1 - EXTERIOR BUILDING LIGHTING POWER (NON-EXEMPT):

- ■ NOT APPLICABLE

TOTAL CONNECTED EXTERIOR LIGHTING POWER:
_____ WATTS SPECIFIED
TOTAL ALLOWABLE EXTERIOR LIGHTING POWER:
_____ WATTS ALLOWED

C405.6 - ELECTRICAL ENERGY CONSUMPTION (DWELLING UNITS):

- ☐ SEPARATE ELECTRICAL METERING HAS BEEN PROVIDED FOR EACH DWELLING UNIT IN GROUP R-2 BUILDINGS.
- ■ NOT APPLICABLE

C405.7 - ELECTRICAL TRANSFORMERS (MANDATORY REQUIREMENTS):

- ☐ ELECTRICAL TRANSFORMERS HAVE BEEN SPECIFIED TO MEET MINIMUM EFFICIENCY REQUIREMENTS PER C405.7, EXCEPT WHERE EXEMPT.
- ■ NOT APPLICABLE

C405.8 - ELECTRICAL MOTORS (MANDATORY REQUIREMENTS):

- ■ ELECTRICAL MOTORS HAVE BEEN SPECIFIED TO MEET MINIMUM EFFICIENCY REQUIREMENTS PER C405.8, EXCEPT WHERE EXEMPT.
- ☐ NOT APPLICABLE

C408 - SYSTEM COMMISSIONING:

- ☐ PROJECT AREA IS LESS THAN 10,000 SQUARE FEET AND IS EXEMPT FROM THE SYSTEM COMMISSIONING REQUIREMENTS OF SECTION C408.
- ■ PROJECT AREA IS GREATER THAN 10,000 SQUARE FEET AND REQUIRES SYSTEM COMMISSIONING PER SECTION C408.

GENERAL PROJECT NOTES:

1. ELECTRICAL CODE COMPLIANCE SHALL BE IN ACCORDANCE WITH NEC 2020.
2. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABEL LISTED BY AN NC APPROVED THIRD PARTY TESTING AGENCY.
3. ARC ENERGY REDUCTION NOT REQUIRED (EXISTING EQUIPMENT).
4. FAULT CURRENT TO BE MARKED PER DETAIL AND RISER AND IN COMPLIANCE WITH NEC 110.24.
5. NO SELECTIVE COORDINATION REQUIRED. LIFE SAFETY INVIDIDUAL BATTERY FIXTURES PROVIDED.
6. UTILITY TRANSFORMER IS EXISTING. NO UTITLITY TRANSFORMER WORK.

SYMBOL SCHEDULE POWER

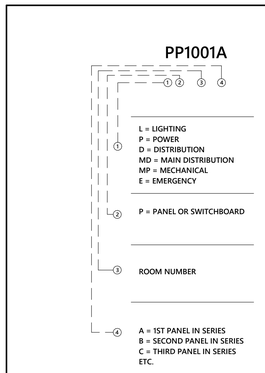
SYMBOL	DESCRIPTION
	WIRING SYSTEM CONCEALED IN WALL OR CEILING.
	WIRING SYSTEM CONCEALED IN OR UNDER SLAB OR UNDERGROUND.
	BRANCH CIRCUIT HOMERUN TO PANEL.

SYMBOL SCHEDULE POWER LEGEND

SYMBOL	DESCRIPTION
	JUNCTION BOX WITH CONNECTION TO EQUIPMENT SERVED. 4" SQUARE BOX WITH A SINGLE-GANG OPENING AND PLASTER RING.
	CEILING MOUNT JUNCTION BOX WITH CONNECTION TO EQUIPMENT SERVED
	208Y/120V THREE PHASE PANELBOARD. SEE SCHEDULE FOR MOUNTING. TOP OF PANEL AT 6'-6" AFF.
	480Y/277V THREE PHASE PANELBOARD. SEE SCHEDULE FOR MOUNTING. TOP OF PANEL AT 6'-6" AFF.
	480-208Y/120V TRANSFORMER. SEE RISER.
	SPECIAL OUTLET. SEE PLANS.
	MODULAR FURNITURE CONNECTION. PROVIDE TRIPLE-GANG BARRIERED J-BOX FOR POWER & TELE/DATA. EXTEND 2"EC TO ABOVE ACCESSIBLE CEILING BUSH END OF CONDUIT.
PP	MODULAR FURNITURE CONNECTION VIA POWER POLE.
	FUSED HEAVY DUTY DISCONNECT SWITCH. NUMERALS INDICATE SWITCH RATING. NEMA 1 ENCLOSURE, UNLESS OTHERWISE NOTED. UNSHADED INDICATES NON-FUSED.
$X	ALL THINGS "X" CAN BE: T = TIMER, (0 -4) HOUR MANUAL TIMER SWITCH, F = FAN SWITCH, VARIABLE SPEED FAN SWITCH

ELECTRICAL FIXTURES LEGEND - COMMERCIAL

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE, 20 AMP, 120 VOLT - TAMPER RESISTANT
GFI	GROUND FAULT RECEPTACLE. NEMA 5-20R DUPLEX. ALL RECEPTACLES INSTALLED OUTSIDE, WITHIN 6' OF A SINK OR IN A KITCHEN SHALL BE GFCI. TAMPER RESISTANT
	DUPLEX RECEPTACLE NEMA, 5-20R, MOUNTED ABOVE COUNTER, OR AT HEIGHT NOTED.
GFI	GROUND FAULT RECEPTACLE - BREAKER AT PANEL. NEMA 5-20R DUPLEX. ALL RECEPTACLES INSTALLED OUTSIDE, WITHIN 6' OF A SINK OR IN A KITCHEN SHALL BE GFCI. TAMPER RESISTANT
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER BACKSPLASH, OR AT HEIGHT NOTED. TAMPER RESISTANT
GFI	GROUND FAULT DUPLEX RECEPTACLE, NEMA 5-20R MOUNTED ABOVE COUNTER BACKSPLASH OR AT HEIGHT NOTED. TAMPER RESISTANT
GFI	GROUND FAULT DUPLEX RECEPTACLE - BREAKER AT PANEL, NEMA 5-20R MOUNTED ABOVE COUNTER BACKSPLASH OR AT HEIGHT NOTED.
WP	WEATHERPROOF GROUND FAULT RECEPTACLE. NEMA 5-20R DUPLEX, CORROSION RESISTANT, WITH IN-USE COVER. TAMPER RESISTANT.
	QUAD RECEPTACLE. TWO NEMA 5-20R DUPLEX RECEPTACLES, OTHERWISE SAME AS DUPLEX RECETACLE ABOVE. TAMPER RESISTANT
GFI	QUAD RECEPTACLE, TWO NEMA 5-20R FOR ELECTRIC WATER COOLER TO BE SUPPLIED BY GROUND FAULT BREAKER. COORDINATE LOCATION WITH PLUMBING CONTRACTOR.
½	QUAD RECEPTACLE. TWO NEMA 5-20R DUPLEX RECEPTACLES. AT HEIGHT NOTED. TAMPER RESISTANT.
GFI	GROUND FAULT QUAD RECEPTACLE. TWO NEMA 5-20R DUPLEX RECEPTACLES. AT HEIGHT NOTED.
	QUAD RECEPTACLE. TWO NEMA 5-20R DUPLEX RECEPTACLES ABOVE COUNTER. TAMPER RESISTANT.
GFI	QUAD RECEPTACLE. TWO NEMA 5-20R DUPLEX GROUND FAULT RECEPTACLES. TAMPER RESISTANT.



PANEL DESIGNATION SYSTEM - CMS STANDARD

NOT TO SCALE

EM./LS LIGHTING FIXTURE SYMBOLS AND DEVICES

SYMBOL	DESCRIPTION
LS EM	INDICATES NEC 702 GENERATOR BACKUP

LIGHTING FIXTURES SYMBOLS AND DEVICES

SYMBOL	DESCRIPTION
$	SINGLE POLE SWITCH, 20 AMP, 120/277 VOLT
$3	THREE WAY SWITCH, 20 AMP, 120/277 VOLT
$K	KEY OPERATED SWITCH
$D	DIMMER SWITCH. DIMMER SIZE TO LOAD AND DEVICE QUANTITY. PROVIDE DOUBLE GANG J-BOX WITH SINGLE GANG TRIM PLATE. PROVIDE DIMMING SWITCH AS RECOMMENDED BY LIGHTING MANUFACTURER.
$VS	WALL MOUNTED VACANCY SENSOR AND SWITCH (MANUAL ON/AUTOMATIC OFF). INFRARED TECHNOLOGY, 120/277 RATED. SENSOR SWITCH WSX, WATT STOPPER PW-301, LEVITON, COOPER OR EQUAL.
PT	CEILING MOUNTED OCCUPANCY SENSOR, DUAL TECHNOLOGY. SENSOR SWITCH CM PDT 10, WATT STOPPER #DT-300, COOPER OAC-DT OR EQUAL.
VS DT	CEILING MOUNTED VACANCY SENSOR, DUAL TECHNOLOGY. SENSOR SWITCH, WATT STOPPER , COOPER OR EQUAL.
$OC	WALL MOUNTED OCCUPANCY SENSOR AND SWITCH. INFRARED TECHNOLOGY WITH NEUTRAL, 120/277V RATED. WATT STOPPER #WS-250, OR EQUAL BY SENSOR SWITCH, AND LEVITON.
$OCD	WALL MOUNTED OCCUPANCY SENSOR AND SWITCH WITH 0-10V DIMMING. INFRARED TECHNOLOGY, WATT STOPPER #DW-311, SENSOR SWITCH, COOPER CONTROLS OR EQUAL. SWITCH SHALL BE INSTALLED IN SINGLE GANG BOX. 120/277VV RATED. VCD - VACANCY TYPE, OCD - OCCUPANCY TYPE.
PP	CEILING MOUNTED OCCUPANCY SENSOR POWER PACK. SENSOR SWITCH PP-20, WATT STOPPER #BZ-100, COOPER SP-20, OR EQUAL.
PP D	CEILING MOUNTED OCCUPANCY SENSOR POWER PACK WITH DIMMER. SENSOR SWITCH PP-20, WATT STOPPER #BZ-100, COOPER SP-20, OR EQUAL.

SECURITY DEVICES SYMBOL LEGEND - ELECTRICAL

SYMBOL	DESCRIPTION
KP	SECURITY KEYPAD - INTRUSION DETECTION. REFER TO SPECIFICATIONS, SCHEDULES, AND DETAILS FOR REQUIREMENTS.
	CAMERA MULTI LENS - VSS. SEE SCHEDULE FOR MOUNTING TYPE. SEE DETAILS, CAMERA SCHEDULE, AND SPECIFICATIONS FOR REQUIREMENTS.
	CAMERA - VSS. SEE SCHEDULE FOR MOUNTING TYPE. SEE DETAILS, CAMERA SCHEDULE, AND SPECIFICATIONS FOR REQUIREMENTS.
DC	DOOR CONTACT - INTRUSION DETECTION. REFER TO SPECIFICATIONS, SCHEDULES AND DETAILS FOR DEVICE REQUIREMENTS.
CR	CARD READER - ACCESS CONTROL. REFER TO SPECIFICATIONS, SCHEDULES AND DETAILS FOR REQUIREMENTS.
GB	GLASS BREAK SENSOR - INTRUSION DETECTION. REFER TO SPECIFICATIONS, SCHEDULES, AND DETAILS FOR REQUIREMENTS.
ES	ELECTRIC STRIKE (PROVIDED BY HARDWARE CONTRACTOR) - ACCESS CONTROL. REFER TO SPECIFICATIONS, SCHEDULES AND DETAILS FOR REQUIREMENTS.
MD L	MOTION DETECTOR - INTRUSION DETECTION. REFER TO SPECIFICATIONS, SCHEDULES AND DETAILS FOR REQUIREMENTS.
PB	PANIC BUTTON - INTRUSION DETECTION, SEE DETAIL AND SPECIFICATIONS.
MSE	MOTION SENSOR EXIT - ACCESS CONTROL - SEE DETAILS AND SPECIFICATIONS FOR REQUIREMENTS
DR	DOOR RELEASE. SEE DETAIL FOR DOOR RELEASE REQUIREMENTS.
DM	DCONTROLLER - ACCESS CONTROL. REFER TO SPECIFICATIONS, SCHEDULES AND DETAILS FOR REQUIREMENTS.
VI	VIDEO INTERCOM ACCESS DEVICE (BY OWNER). ELECTRICAL CONTRACTOR TO PROVIDE BACKBOX WITH 3/4"C BY E.C. SEE DETAIL FOR REQUIREMENTS.
DS	DOOR POSITION SENSOR - ACCESS CONTROL. SEE DETAILS AND SPECIFICATIONS FOR REQUIREMENTS.
SP	CAMERA SURGE PROTECTION - VSS, SEE DETAIL AND SPECIFICATIONS.
EH	ELECTRIFIED HARDWARE (PROVIDED BY HARDWARE CONTRACTOR) - ACCESS CONTROL. SEE DETAILS AND SPECIFICATIONS FOR REQUIREMENTS AND COORDINATION.

LISTING AND LABELING

ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, AND EQUIPMENT SHALL BE LABEL LISTED BY A NORTH CAROLINA APPROVED THIRD PARTY TESTING AGENCY (MECKLENBURG COUNTY CODE ENFORCEMENT)

GENERAL PROJECT NOTES:
1. ELECTRICAL CODE COMPLIANCE SHALL BE IN ACCORDANCE WITH NEC 2020.

ELECTRICAL SHEET INDEX

SHEET NUMBER	SHEET NAME
E001	COMPOSITE DEMOLITION FLOOR PLAN
E002	COMPOSITE DEMOLITION FLOOR PLAN - ROOF
E003	COMPOSITE DEMOLITION RCP PLAN
E100	ELECTRICAL LEGEND AND NOTES
E101	LIGHTING FIXTURE AND MECHANICAL SCHEDULES
E301	COMPOSITE POWER PLAN
E302	POWER PLAN - AREA A
E401	LIGHTING PLAN - AREA A
E403	RCP COORDINATION
E501	ENLARGED INTERCOM PLAN - AREA A
E502	COMPOSITE SOUND MASKING PLAN
E601	ENLARGED FIRE ALARM PLAN - AREA A
E602	ENLARGED FIRE ALARM PLAN -AREA B
E701	ENLARGED SECURITY PLAN - AREA A
E800	POWER RISER DIAGRAM
E801	PANEL SCHEDULES
E802	PANEL SCHEDULES
E811	ELECTRICAL DETAILS
E812	LIGHTING DETAILS
E813	SECURITY - INTRUSION DETECTION, VIDEO SURVEILLANCE AND ACCESS CONTROL DETAILS
E814	ELECTRICAL DETAILS - FIRE ALARM AND INTERCOM

EXISTING/DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	HALFTONE SYMBOL INDICATES EXISTING
	DASHED SYMBOL INDICATES REMOVED

SPECIAL SYSTEMS LEGEND

SYMBOL	DESCRIPTION
	SOUND MASKING SPEAKER. ATLAS IED MI1000 OR EQUAL
S	FLUSH-MOUNTED CEILING PA SPEAKER. SEE DETAIL AND SPECIFICATIONS.

TELECOM LEGEND - ELECTRICAL

SYMBOL	DESCRIPTION
WAP	STRUCTURE MOUNTED JUNCTION BOX FOR WIRELESS ACCESS POINT IN OPEN CEILING APPLICATIONS. 4" SQUARE BOX WITH A TWO-GANG OPENING. STUB 1" EC FROM BOX TO J-HOOKS OR CABLE TRAY ABOVE ACCESSIBLE CEILING. PROVIDE CABLING, TERMINATIONS AND FACEPLATE PER SPECIFICATIONS.
	FIRE RATED PLYWOOD TELEPHONE BACKBOARD BY TELECOM CONTRACTOR. SIZE AS INDICATED IN TELECOM ROOMS.
#	TELE/DATA OUTLET ABOVE COUNTER OR HEIGHT SPECIFIED. 3/4" EC STUBBED UP 6" ABOVE NEAREST ACCESSIBLE CEILING FOR J-HOOK SYSTEM OR TO LOCAL CABLE TRAY AS APPLICABLE WITH PULL STRING. 4" SQUARE BOX WITH A SINGLE-GANG OPENING AND PLASTER RING.
#	TELE/DATA OUTLET. 3/4" EC STUBBED UP 6" ABOVE NEAREST ACCESSIBLE CEILING RING WITH PULL STRING. DOUBLE GANG BOX, 2-1/8"DEEP WITH A SINGLE-GANG OPENING AND PLASTER RING.
#	TELE/DATA OUTLET. 3/4" EC STUBBED UP 6" ABOVE NEAREST ACCESSIBLE CEILING RING WITH PULL STRING. DOUBLE GANG BOX, 2-1/8"DEEP WITH A SINGLE-GANG OPENING AND PLASTER RING.
	TELE/DATA OUTLET +18" AFF. 3/4" EC STUBBED UP 6" ABOVE NEAREST ACCESSIBLE CEILING RING WITH PULL STRING. DOUBLE GANG BOX, 2-1/8"DEEP WITH A SINGLE-GANG OPENING AND PLASTER RING.
#	TELE/DATA OUTLET ABOVE COUNTER OR HEIGHT SPECIFIED. 3/4" EC STUBBED UP 6" ABOVE NEAREST ACCESSIBLE CEILING FOR J-HOOK SYSTEM OR TO LOCAL CABLE TRAY AS APPLICABLE WITH PULL STRING. 4" SQUARE BOX WITH A SINGLE-GANG OPENING AND PLASTER RING.
#	TELE/DATA OUTLET. 1.5" EC STUBBED UP 6" ABOVE NEAREST ACCESSIBLE CEILING FOR J-HOOK SYSTEM OR TO LOCAL CABLE TRAY AS APPLICABLE WITH PULL STRING. 4"X3.25" DEEP SQUARE BOX WITH A SINGLE-GANG OPENING AND PLASTER RING.
WAP	PROVIDE 1" RACEWAY AND JUNCTION BOX FOR LOCATIONS AP IS LOCATED IN AN AREA WITH NO ACCESSIBLE CEILING.
TMGB SBB	PBB - TELECOMMUNICATIONS MAIN GROUND BAR, 24" WIDE. SBB - TELECOMMUNICATIONS GROUND BAR, 12" WIDE.

NFPA FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR
WF	SPRINKLER FLOW SWITCH
VS	VALVE SUPERVISORY SWITCH
	HEAT DETECTOR/SENSOR.
F	PULLSTATION/FIRE ALARM
	SMOKE DETECTOR/SENSOR (DEFAULT PHOTOELECTRIC TYPE)
RI	FIRE ALARM CEILING MOUNT INDICATOR
	FIRE ALARM BELL NOTIFICATION
	FIRE ALARM AUDIBLE ONLY, WHITE FINISH
15cd	FIRE ALARM STROBE (CANDELAS), WHITE FINISH
15cd	ADA COMPLIANT WALL MOUNTED FIRE ALARM SPEAKER WITH STROBE LIGHT, 15CD UNLESS OTHERWISE NOTED. WHITE FINISH.
15cd	FIRE ALARM STROBE (CANDELAS), WHITE FINISH. CEILING MOUNTED.
	FIRE ALARM SPEAKER, WHITE FINISH. CEILING MOUNTED.
15cd	FIRE ALARM STROBE/SPEAKER, WHITE SPEAKER. CEILING MOUNTED.

DUCT DETECTOR SYMBOL LEGEND

SYMBOL	DESCRIPTION
D D	RECTANGULAR DUCT MOUNTED DUCT DETECTOR. FURNISHED AND CONNECTED BY ELECTRICAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR. CUTTING OF DUCT, INSTALLATION OF DETECTOR, AND DETERMINATION OF SAMPLING TUBE LENGTH SHALL BE THE MECHANICAL CONTRACTOR. PROVIDE REMOTE INDICATING LIGHT WITH EACH DETECTOR.

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North Carolina License Number C-0914

NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
07/07/2025

ISSUE FOR: CONSTRUCTION

ISSUE DATE: 06.16.2025

REVISIONS

NO.	REASON	DATE
1	PERMIT COMMENTS	07/07/2025

PROJECT TEAM

PRINCIPAL IN CHARGE: Ashley Hall

PROJECT MANAGER: Lynn Guimaraes

DESIGN TEAM

LIGHTING (ALLOWED)

BLDG AREA TOTAL SF	MULT	BLDG AREA METHOD (W/SQFT)	EQUALS	TOTAL LIGHTING WATTS	WATTS (ALLOWED) W/10% REDUCTION
10,720	X	0.82	=	8,790.4	7,911.36

LIGHTING DENSITY SCHEDULE

ROOM NAME	ROOM NUMBER	AREA	TOTAL LIGHTING LOAD	LIGHTING DENSITY	ILLUMINATION (FC)
COLLAB	1114	200.7 SF	136.36 W	0.68 W/ft²	47 fc
OFFICE	1213	358.7 SF	210.10 W	0.59 W/ft²	52 fc
OFFICE	1214	363.7 SF	210.10 W	0.58 W/ft²	52 fc
OFFICE	1205	401.7 SF	262.63 W	0.65 W/ft²	58 fc
OFFICE	1204	401.8 SF	262.63 W	0.65 W/ft²	58 fc
MEET	1002	89.6 SF	40.40 W	0.45 W/ft²	30 fc
MEET	1003	98.1 SF	40.40 W	0.41 W/ft²	28 fc
MEET	1202	90.3 SF	65.66 W	0.73 W/ft²	44 fc
MEET	1215	220.2 SF	131.31 W	0.60 W/ft²	46 fc
MEET	1103	172.3 SF	136.36 W	0.79 W/ft²	55 fc
MEET	1104	167.2 SF	136.36 W	0.82 W/ft²	56 fc
OPEN OFFICE	1102	590.7 SF	278.98 W	0.47 W/ft²	45 fc
OFFICE	1217	363.7 SF	265.66 W	0.73 W/ft²	70 fc
OFFICE	1216	363.6 SF	210.10 W	0.58 W/ft²	52 fc
MEET	1210	201.6 SF	136.36 W	0.68 W/ft²	47 fc
MEET	1211	204.0 SF	136.36 W	0.67 W/ft²	47 fc
MDF ROOM	1209	265.8 SF	181.82 W	0.68 W/ft²	41 fc
STORAGE	1100	195.3 SF	105.05 W	0.54 W/ft²	42 fc
STORAGE	1208	769.9 SF	409.09 W	0.53 W/ft²	49 fc
COPY/PRINT	1212	95.6 SF	65.66 W	0.69 W/ft²	43 fc
COPY/PRINT	1203	87.3 SF	65.66 W	0.75 W/ft²	45 fc
COPY/PRINT	1109	140.3 SF	105.05 W	0.75 W/ft²	45 fc
MAIL	1107	187.0 SF	181.82 W	0.97 W/ft²	69 fc
MEET	1110	114.6 SF	90.91 W	0.79 W/ft²	49 fc
STORAGE	1111	170.0 SF	90.91 W	0.53 W/ft²	37 fc
MEET	1207	84.7 SF	65.66 W	0.78 W/ft²	46 fc
HYGIENE	1008	90.3 SF	65.66 W	0.73 W/ft²	44 fc
MEN'S	1011	277.7 SF	221.60 W	0.80 W/ft²	50 fc
WOMEN'S	1010	268.7 SF	221.60 W	0.82 W/ft²	52 fc
LAUNDRY & SUPPLY	1012	136.0 SF	90.91 W	0.67 W/ft²	44 fc
WELL	1004	95.4 SF	90.91 W	0.95 W/ft²	55 fc
CHILD RESTROOM	1005	63.5 SF	45.45 W	0.72 W/ft²	37 fc
ELEC	1014	137.0 SF	85.71 W	0.63 W/ft²	58 fc
CHILD RESTROOM	1006	63.5 SF	45.45 W	0.72 W/ft²	37 fc
HYGIENE	1007	68.3 SF	52.53 W	0.77 W/ft²	44 fc
PANTRY	1009	207.3 SF	136.36 W	0.66 W/ft²	45 fc
OPEN OFFICE	1206	882.2 SF	327.27 W	0.37 W/ft²	55 fc
PUMP RM	14	259.2 SF	134.82 W	0.52 W/ft²	82 fc
OFFICE	1229	118.7 SF	105.05 W	0.88 W/ft²	60 fc
FIRE RISER	32A	30.1 SF	42.86 W	1.42 W/ft²	76 fc
STORAGE	1106	372.7 SF	227.27 W	0.61 W/ft²	49 fc
OPEN OFFICE-1	1108-1	927.0 SF	361.99 W	0.39 W/ft²	38 fc
RECEPTION-1	1001	763.0 SF	526.25 W	0.69 W/ft²	74 fc
CORRIDOR	1113	289.9 SF	190.09 W	0.66 W/ft²	104 fc
CORRIDOR	1016	474.9 SF	256.94 W	0.54 W/ft²	53 fc
CORRIDOR-1	1019-1	368.4 SF	304.99 W	0.83 W/ft²	65 fc
CORRIDOR	1218	479.1 SF	269.70 W	0.56 W/ft²	60 fc
CORRIDOR	1015	276.7 SF	160.98 W	0.58 W/ft²	87 fc
CORRIDOR	1200	450.5 SF	294.70 W	0.65 W/ft²	64 fc
COLLAB	2104	147.5 SF	131.31 W	0.89 W/ft²	61 fc
OPEN OFFICE	1201	695.5 SF	400.19 W	0.58 W/ft²	54 fc
COLLAB	1221	198.3 SF	210.10 W	1.06 W/ft²	81 fc
FOCUS	1223	84.4 SF	90.91 W	1.08 W/ft²	60 fc
FOCUS	1222	85.4 SF	90.91 W	1.06 W/ft²	60 fc
JAN	1013	112.3 SF	85.71 W	0.76 W/ft²	63 fc
EXEC OFFICE	1231	174.9 SF	131.31 W	0.75 W/ft²	53 fc
OPEN OFFICE	1225	1077.8 SF	368.69 W	0.34 W/ft²	39 fc
MEET	1226	177.0 SF	105.05 W	0.59 W/ft²	44 fc
OPEN OFFICE	1238	1315.9 SF	474.75 W	0.36 W/ft²	43 fc
CORRIDOR-2	1019-2	260.9 SF	165.03 W	0.63 W/ft²	36 fc
STORAGE	1105	152.8 SF	90.91 W	0.59 W/ft²	40 fc
OPEN OFFICE-2	1108-2	808.0 SF	396.97 W	0.49 W/ft²	73 fc
CORRIDOR	1019B	407.3 SF	386.43 W	0.95 W/ft²	65 fc
OFFICE	1236	120.0 SF	105.05 W	0.88 W/ft²	60 fc
OFFICE	1228	120.0 SF	105.05 W	0.88 W/ft²	60 fc
OFFICE	1235	120.0 SF	105.05 W	0.88 W/ft²	60 fc
OFFICE	1234	120.0 SF	105.05 W	0.88 W/ft²	60 fc
OFFICE	1233	120.0 SF	105.05 W	0.88 W/ft²	60 fc
OFFICE	1230	120.0 SF	105.05 W	0.88 W/ft²	60 fc
EXEC OFFICE/MEET	1232	180.0 SF	131.31 W	0.73 W/ft²	54 fc
COLLAB	1239	114.0 SF	59.79 W	0.52 W/ft²	63 fc
CORRIDOR	1029	357.6 SF	167.68 W	0.47 W/ft²	47 fc
OPEN OFFICE	1225A	472.3 SF	478.98 W	1.01 W/ft²	69 fc
MEET	1237	180.0 SF	105.05 W	0.58 W/ft²	45 fc
OFFICE	1227	120.0 SF	105.05 W	0.88 W/ft²	60 fc

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MINIMUM LUMENS	CCT	TOTAL FIXURE WATTAGE	DRIVER	VOLTAGE	MANUFACTURER	MODEL	REMARKS
EMB1	INTERIOR EMERGENCY BATTERY EGRESS LIGHT AIMABLE			5.0 W	INTEGRAL LED DRIVER	277V	LITHONA HUBBELL JUNO COOPER	ELM2L	TEST SWITCH PROVIDED SEALED 90 MINUTE BATTERY 20' (ON CENTER) X 6'W DESIGN PATH SELF TEST SDRT WITH RTKIT
EMBC1	INTERIOR EMERGENCY BATTER EGRESS LIGHT AIMABLE - CEILING MOUNT			5.0 W	INTEGRAL LED DRIVER	277V	LITHONA HUBBELL JUNO COOPER	ELM2L	TEST SWITCH PROVIDED SEALED 90 MINUTE BATTERY 20' (ON CENTER) X 6'W DESIGN PATH SELF TEST SDRT WITH RTKIT
EX1B	EXIT SIGN			1.0 W	INTEGRAL LED DRIVER	277V	LITHONA HUBBELL JUNO COOPER PHILIPS	QUANTUM LQM S W R 120/277 EL N DUAL LITE LX U R W E NAVILLITE NXPBA R WH SURE-LITES LPX 7 CHLORIDE VE	NICKEL CADMIUM BATTERY EXIT SIGN; SEE PLANS FOR FACE STYLE AND QTY 90 MINUTE OPERATION TEST SWITCH PROVIDED;SELF DIAGNOSTIC UL LISTED FOR DAMP LOCATIONS
FPL2	2X2 LED LAY-IN PANEL	2,000	4000K	30.0 W	INTEGRAL LED DRIVER (STANDARD 0-10V DIMMING)	UNIV	LITHONIA DAYBRITE COOPER	EPANL 2X2 2FPZ 22FPSLSCT3	UL LISTED DAMP LOCATIONS DLC LISTED
FPL6	2X4 LED LAY-IN TROFFER	5,600	4000K	52.0 W	INTEGRAL LED DRIVER (STANDARD 0-10V DIMMING)	UNIV	LITHONIA DAYBRITE COOPER	EPANL 2X4 2FPZ 24FPSLSCT9	UL LISTED DAMP LOCATIONS
FPL7	2X4 LED LAY-IN TROFFER	7,200	4000K	65.0 W	INTEGRAL LED DRIVER (STANDARD 0-10V DIMMING)	UNIV	LITHONIA DAYBRITE COOPER	EPANL 2X4 2FPZ 24FPSLSCT9	UL LISTED DAMP LOCATIONS
STL1	4 FT. LED STRIP	5,000	4000K	42.0 W	INTEGRAL LED DRIVER (STANDARD 0-10V DIMMING)	UNIV	LITHONIA COLUMBIA CREE COOPER DAY-BRITE	CLX LED FSS LCL 4-OCI SNLED	PROVIDE CHAIN FOR PENDANT MOUNTING PROVIDE WIRE GUARD LENSED DLC LISTED

1. ALL FIXTURES SHALL BE LED UNLESS OTHERWISE SPECIFIED. COLOR TEMPERATURE SHALL BE 4000K UNLESS OTHERWISE NOTED.
2. LED DRIVERS SHALL BE PROVIDED FROM PER MANUFACTURER RECOMMENDATION. AS PART OF THIS RECOMMENDATION COORDINATE THE REQUIRED WAVE OUTPUT SO THEY ARE COMPATIBLE.
3. SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT FIXTURE LOCATIONS.
4. SUSPEND ALL FOUR CORNERS WITH WIRE TO STRUCTURE. DO NOT ALLOW GRID ALONE TO SUPPORT FIXTURE.
5. DIMMING OF FIXTURES SHALL BE WITH A SWITCH AS RECOMMENDED BY THE DRIVER MANUFACTURER.
6. THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE.
7. DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.
8. NO SUBSTITUTIONS WILL BE ALLOWED DUE TO LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.
9. ALL EXPEDITED EXPENSES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
10. FIXTURES TO BE INSTALLED IN CEILINGS, INDICATED ON ARCHITECTURAL PLANS AS HAVING INSULATION IN CONTACT WITH CEILING SURFACE, SHALL BE IC RATED BY MANUFACTURER.
11. LED DRIVERS LOCATED IN UNCONDITIONED SPACES SHALL BE RATED FOR 90 DEGREES F.

WATER SOURCE HEAT PUMP SCHEDULE

SYMBOL	EVAPORATOR COOLING COIL NOMINAL (TONS)	FAN MOTOR HP	FAN MOTOR FLA	COMPRESSOR (EA) MOTOR QTY	COMPRESSOR (EA) MOTOR LRA	COMPRESSOR (EA) MOTOR RLA	ELECTRICAL DATA VOLTAGE	ELECTRICAL DATA PHASE	ELECTRICAL DATA MCA	ELECTRICAL DATA MOCP	ELECTRICAL DATA VFD	DISCONNECT
WSHP-1225A	5.0	1.00	0.0	0	0.0	0.0	480 V	3	12.0	15.0		30/FI5-3P
WSHP-1225B	4.0	1.00	0.0	0	0.0	0.0	480 V	3	9.0	15.0		30/FI5-3P
WSHP-1226	0.8	0.33	0.0	0	0.0	0.0	277 V	1	5.0	15.0		30/FI5-1P
WSHP-1231	1.5	0.50	0.0	0	0.0	0.0	277 V	1	11.0	15.0		30/FI5-1P
WSHP-1232	0.8	0.33	0.0	0	0.0	0.0	277 V	1	5.0	15.0		30/FI5-1P
WSHP-1235	1.0	0.33	0.0	0	0.0	0.0	277 V	1	6.0	15.0		30/FI5-1P
WSHP-1237	0.8	0.33	0.0	0	0.0	0.0	277 V	1	5.0	15.0		30/FI5-1P
WSHP-1238	5.0	1.00	0.0	0	0.0	0.0	480 V	3	12.0	15.0		30/FI5-3P
WSHP-1239	5.0	1.00	0.0	0	0.0	0.0	480 V	3	12.0	15.0		30/FI5-3P

LIGHTING SEQUENCE OF OPERATION

A COMPLETE AND OPERATIONAL LIGHTING CONTROL SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS (SECTION 260923) AND AS INTENDED ON THESE PLANS. ALL CONTROL POINTS AND EQUIPMENT SEQUENCES OF OPERATION LISTED IN SPECIFICATION SECTION 260923 SHALL BE CONSIDERED IN ADDITION TO THOSE LISTED HERE. IN THE EVENT THAT THE VERBIAGE IS IN CONFLICT OR CONTRADICTS THE REQUIREMENTS LISTED HERE, THE QUESTION SHALL BE ASKED PRIOR TO BIDDING OR THE MORE STRINGENT SHALL APPLY.

SYSTEM DESCRIPTION:
LIGHTING CONTACTORS SHALL BE INTEGRATED WITH THE BAS SYSTEM. INDEPENDENT SENSORS SHALL BE INDEPENDENT AND NOT TIED INTO THE FACILITY BUILDING AUTOMATION SYSTEM (BAS) SOFTWARE. (NOTE: BAS IS PROVIDED AND INSTALLED BY THE MECHANICAL CONTRACTOR)

OCCUPANCY/VACANCY SENSORS
1. WALL MOUNTED OCCUPANCY/VACANCY SENSORS SHALL OPERATE INDEPENDENT OF LIGHTING CONTROL SYSTEM.
2. ALL OCCUPANCY SENSORS SHALL BE PROGRAMMED FOR AUTOMATIC ON (FULL LEVELS) AND AUTOMATIC OFF.
3. ALL VACANCY SENSORS SHALL BE PROGRAMMED FOR MANUAL ON (FULL LEVELS) AND AUTOMATIC OFF.

TIMER SETTINGS :
A. WALL SWITCH PASSIVE INFRARED: 2 MINUTES FOR INDIVIDUAL RESTROOMS AND STORAGE ROOMS.
B. OPEN OFFICE OCCUPANCY : 30 MINS.
C. WALL SWITCH VACANCY SENSORS OFFICES: 5 MINS.
D. CONFERENCE ROOM SENSORS OFFICES: 10 MINS.
E. OTHER SPACES NOT IDENTIFIED: 15 MINS.

TIME SCHEDULES:
INDIVIDUAL AREAS INTENT OF CONTROL:
- ELECTRICAL ROOMS, MECHANICAL ROOMS, ETC.: MANUAL ON/OFF SWITCH ONLY FOR PERSONNEL SAFETY.
- STORAGE ROOMS: ON/OFF WALL SWITCH VACANCY SENSORS (PASSIVE INFRARED.)
- OFFICES/WORKROOMS: 0-10V DMMING VIA ON/OFF/DIMMING SWITCHES WITH INTEGRAL OCCUPANCY SENSORS.
- SMALL STORAGE/UTILITY ROOMS: ON/OFF WALL SWITCH VACANCY SENSORS (PASSIVE INFRARED.)
- OPEN OFFICE: 0-10V DIMMING SWITCH CONTROLS ALL FIXTURES.

EMERGENCY LIGHTING CONTROL:
A. SEPARATE EMERGENCY BATTERY TYPE FIXTURES. 90 MINUTE OPERATION.

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PROJECT TEAM:
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME:
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO.
1641630004

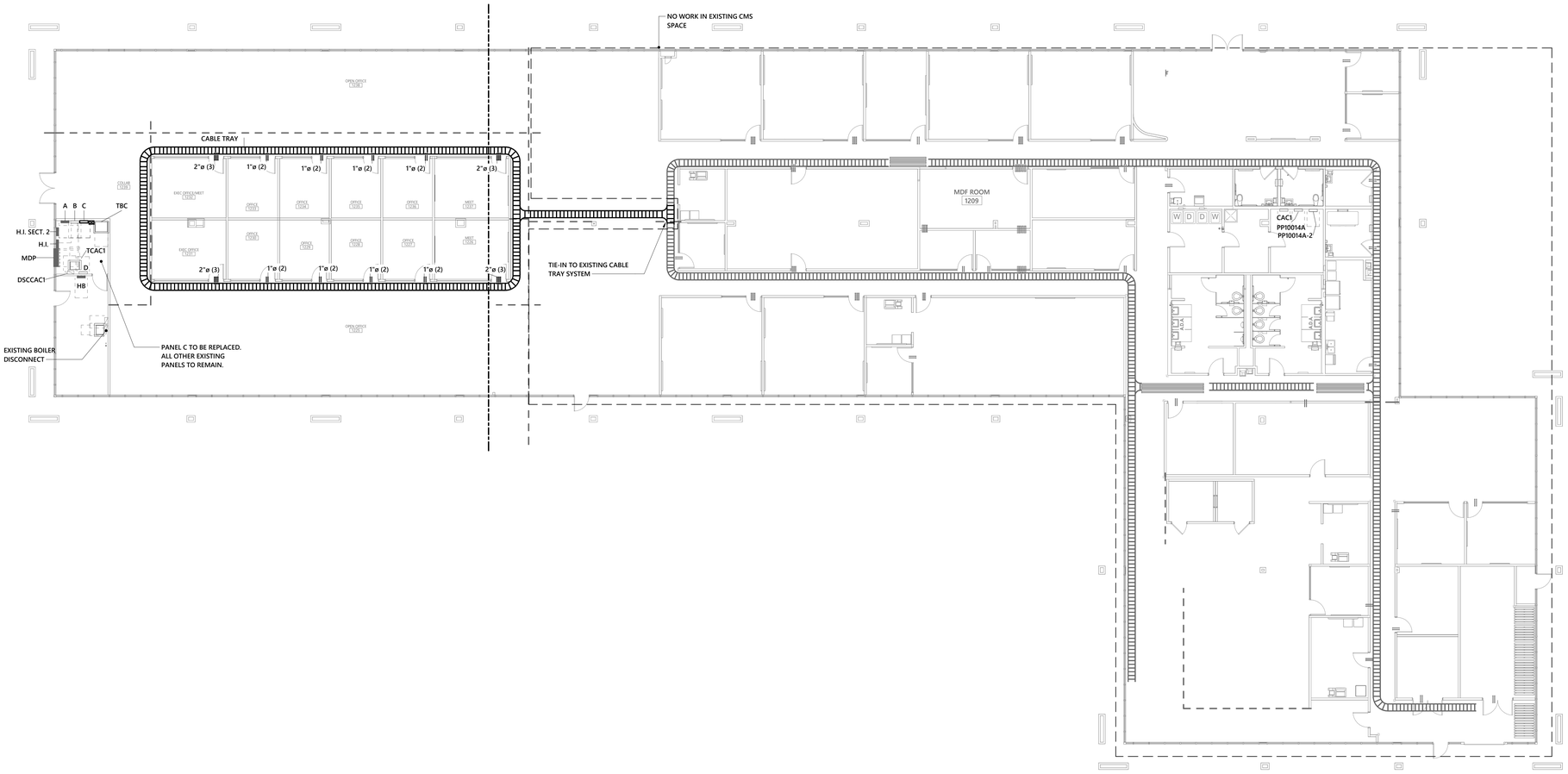
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LIGHTING FIXTURE AND MECHANICAL SCHEDULES

SHEET NUMBER:
E101

Optima Project # 22-0013

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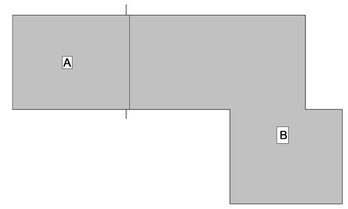


1 **COMPOSITE POWER PLAN**
3/32" = 1'-0"

GENERAL NOTES:
1. WHERE CONDUITS ARE PERMITTED TO BE EXPOSED, THEY SHALL BE PAINTED TO MATCH CEILING.
2. PROVIDE BUSHINGS FOR CONDUIT SLEEVES.
3. UTILIZE J-HOOKS FOR FREE-HUNG CABLING NOT LOCATED IN CABLE TRAY OR CONDUIT.
4. TELECOM OUTLETS LOCATED IN MECHANICAL ROOMS AND ELECTRICAL ROOMS SHALL HAVE CONTINUOUS CONDUIT FROM THE OUTLET BOX TO THE NEAREST CABLE TRAY, TELECOM ROOM OR ACCESSIBLE CEILING. NO FREE RUN CABLING IS PERMITTED IN THESE ROOMS.
5. CABLE TRAYS ARE TO BE 12"X4" UNLESS OTHERWISE NOTED.
6. BRANCH CIRCUITS AND FEEDERS ARE NOT PERMITTED TO BE ROUTED OVER MDF (DATA ROOMS) UNLESS SPECIFICALLY FEEDING EQUIPMENT/DEVICES IN THAT ROOM.

KEYED NOTES:
1. ROUTE CONDUIT ABOVE CORRIDOR CEILING TO EXISTING ELECTRICAL ROOM FOR NEW WORK ROUTED BACK TO EXISTING PANELS. WORK SHALL BE SCHEDULED DURING AFTER HOURS OF DMV NORMAL OPERATING HOURS.

KEYPLAN



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PROJECT TEAM
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO.
1641630004

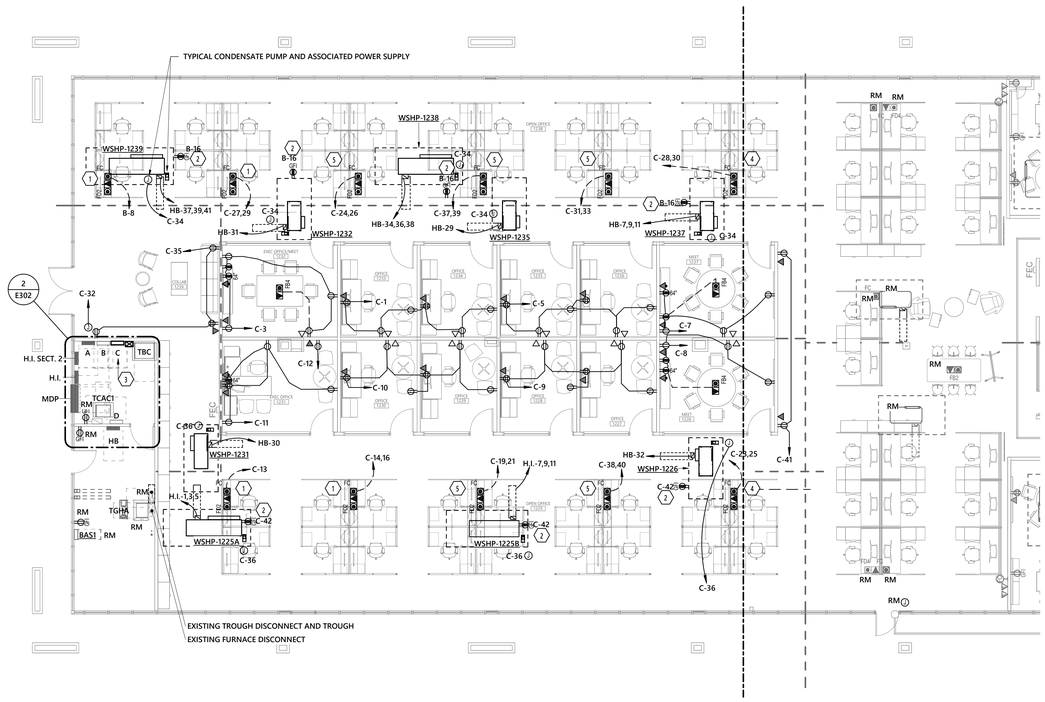
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SHEET NUMBER
E301

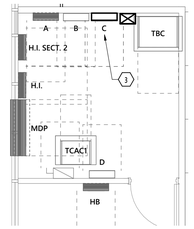
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1 **POWER PLAN - AREA A**
1/8" = 1'-0"



2 **ENLARGED ELEC 13**
1/4" = 1'-0"

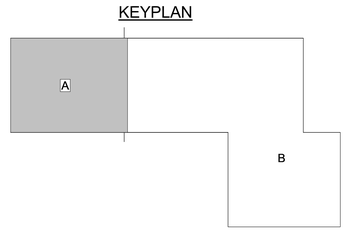
GENERAL NOTES:

A. FLOOR BOXES REQUIRE SAWCUTTING FROM LOCATION TO LOCAL WALL FOR POWER AND TELECOM. SEE ARCHITECTURAL PLANS FOR DIMENSIONED LOCATIONS.
B. SEE TELECOM PLANS FOR TELECOM DEVICE HEIGHTS REQUIRED.
C. DEVICES SHALL BE FLUSH MOUNTED UNLESS OTHERWISE NOTED. DEVICES LOCATED IN THE ELECTRICAL ROOMS, MECHANICAL ROOMS, AND ELEVATOR EQUIPMENT ROOM SHALL BE SURFACE MOUNTED.
D. ELECTRICAL CONTRACTOR TO CONNECT FURNITURE POWER HARNESS TO PROVIDED BRANCH CIRCUIT. FURNITURE POWER HARNESS SUPPLIED BY FURNITURE CONTRACTOR.

NOTES

1. FLUSH MOUNT FURNITURE CONNECTION FLOORBOX. 2#12,1#10N, 1#12G,, 1"C. FOR POWER.
2. GFCI PROTECTED OUTLET FOR MECHANICAL MAINTENANCE OF THE LOCAL ABOVE CEILING MECHANICAL UNIT. MOUNT ON STRUCTURE, ADJACENT EQUIPMENT.
3. NEW 200A MCB, 208/120V, 42 POLE PANEL TO REPLACE EXISTING PANEL 'C'. EXTEND CONDUIT AND CONDUCTORS AS REQUIRED REFEED CIRCUITS TO REMAIN. ALL OTHER EQUIPMENT EXISTING TO REMAIN.
4. FLUSH MOUNT FURNITURE CONNECTION FLOORBOX. 2#8,1#6N, 1#8G,, 1"C. FOR POWER.
5. FLUSH MOUNT FURNITURE CONNECTION FLOORBOX. 2#10,1#8N, 1#10G,, 1"C. FOR POWER.

KEYPLAN



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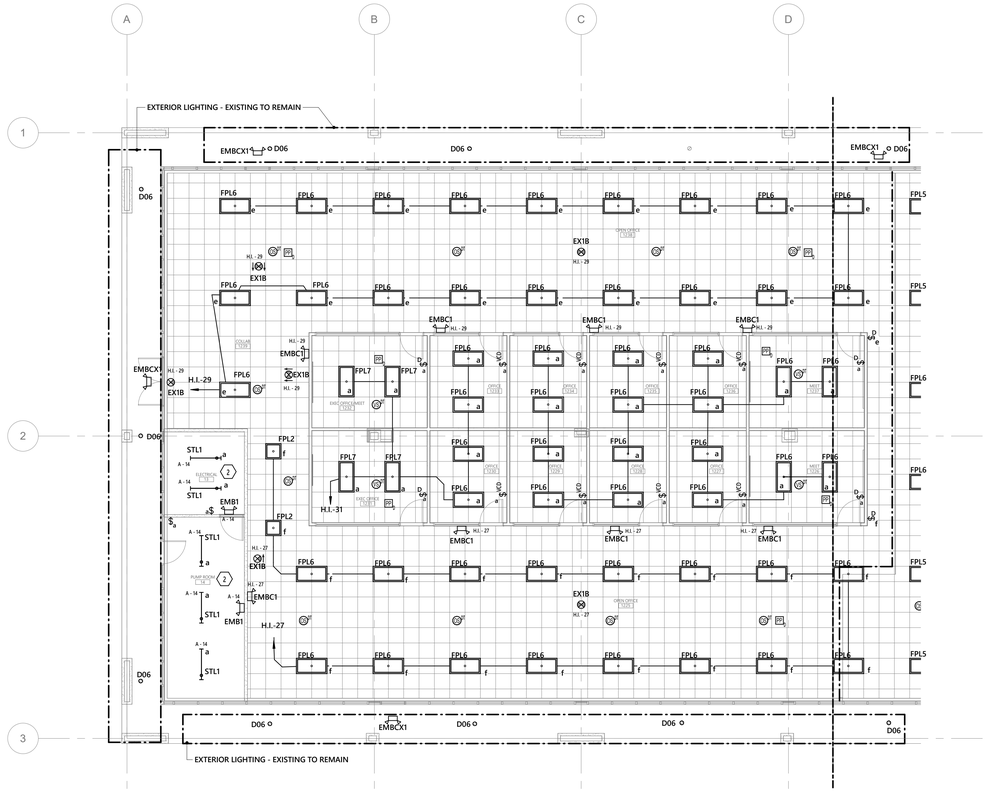
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DESIGN TEAM: Designer

PROJECT NAME:
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO: 1641630004
SHEET TITLE: POWER PLAN - AREA A
SHEET NUMBER: E302
Optima Project # 22-0013

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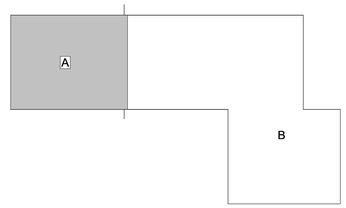
1 **ENLARGED LIGHTING REFLECTED CEILING PLAN - AREA A**

1/8" = 1'-0"

GENERAL NOTES:

1. CONNECT ALL EMERGENCY FIXTURES AND EXIT SIGNS TO LOCAL CIRCUIT AHEAD OF ALL SWITCHING/CONTROLS (CONSTANT HOT).
2. ALL EXIT SIGNS ARE POWERED BY THE LOCAL EMERGENCY CIRCUIT, UNSWITCHED.
3. SWITCH CONTROL OF DIMMING ZONES SEE DETAIL REFERENCE "CLASSROOM SWITCH CONTROL - DIMMING".

KEYPLAN



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NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
06.16.2025

ISSUE FOR:
CONSTRUCTION

ISSUE DATE:
06.16.2025

REVISIONS:

NO.	REASON	DATE

PROJECT TEAM:
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME:
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO.
1641630004

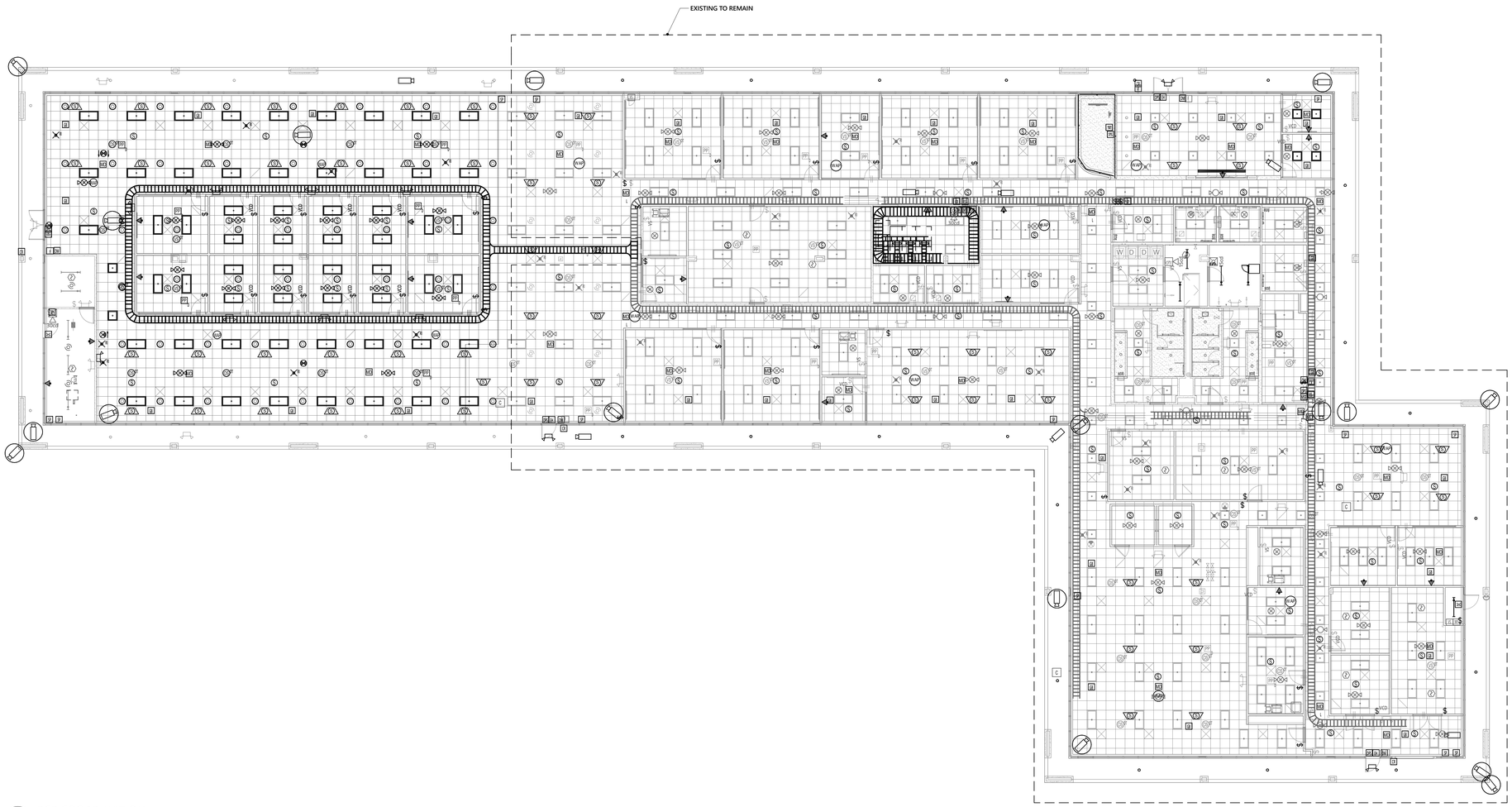
SHEET TITLE:
LIGHTING PLAN - AREA A

SHEET NUMBER:
E401

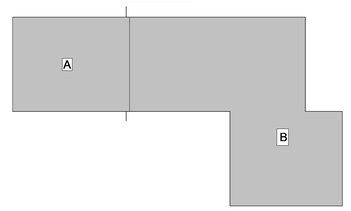
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1 **RCP COORDINATION**
3/32" = 1'-0"



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PROJECT NO:
1641630004

SHEET TITLE:
RCP COORDINATION

SHEET NUMBER:
E403

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1 **ENLARGED INTERCOM REFLECTED CEILING PLAN - AREA A**
1/8" = 1'-0"

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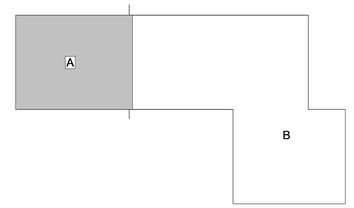
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CONSTRUCTION

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06.16.2025

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Designer

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6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO:
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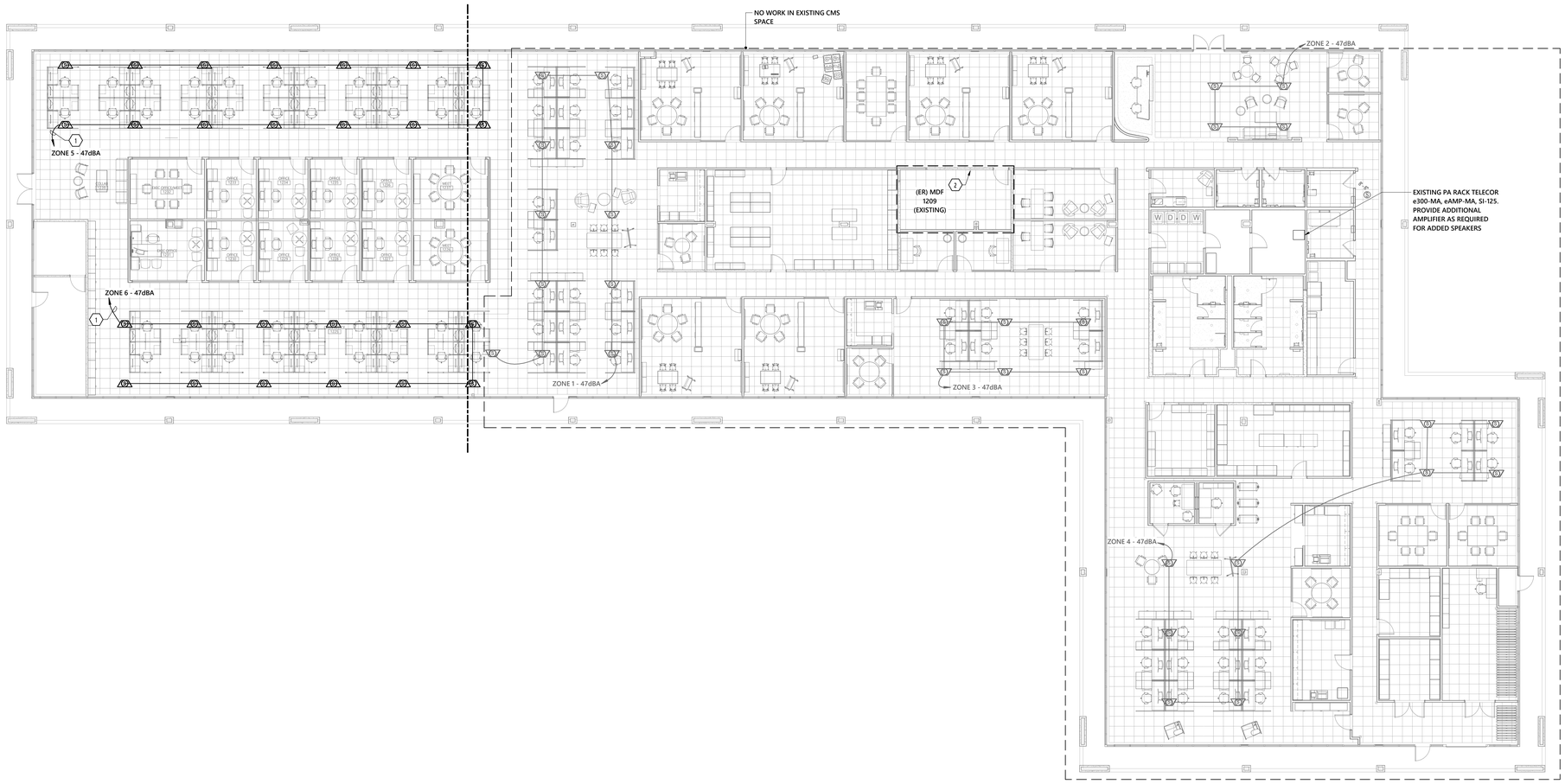
SHEET TITLE:
ENLARGED INTERCOM PLAN - AREA A

SHEET NUMBER:
E501

Optima Project # 22-0013

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1 COMPOSITE AUDIO-VISUAL PLAN

3/32" = 1'-0"

GENERAL NOTES:

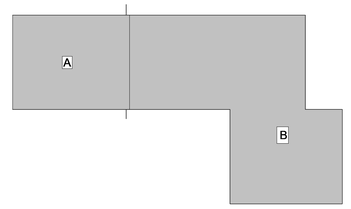
A. CONTRACTOR SHALL PROVIDE A SOUND MASKING SYSTEM (ATLAS OR EQUAL) IN ALL OPEN OFFICE WORK/COLLABORATION SPACES AND RECEPTION/WAITING AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL COMPONENTS, CONNECTORS, AND CABLES TO COMPLETE A FULLY FUNCTIONAL SYSTEM.

B. EXISTING SOUND MASKING SPEAKERS ARE SHOWN IN HALF-TONE FOR REFERENCE ONLY.

DRAWING NOTES: (#)

1. PROVIDE 18/2 AWG PLENUM RATED CABLE (TYPICAL).
2. PROVIDE WALL MOUNTED 2-ZONE HIGH DEFINITION SOUND MASKING ACOUSTICAL SYSTEM (ATLAS: Z2-B) OR APPROVED EQUAL. CONTRACTOR SHALL ROUTE CABLING FOR SOUND MASKING SYSTEM TO WALL MOUNTED 2-ZONE SOUND MASKING ACOUSTICAL SYSTEM LOCATED IN EXISTING (ER) MDF 1209. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH OWNER/ARCHITECT PRIOR TO INSTALLATION. CONNECT TO LOCAL RECEPTACLE PROVIDED IN PREVIOUS PROJECT.

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06.16.2025

ISSUE FOR
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DESIGN TEAM

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PROJECT NO.
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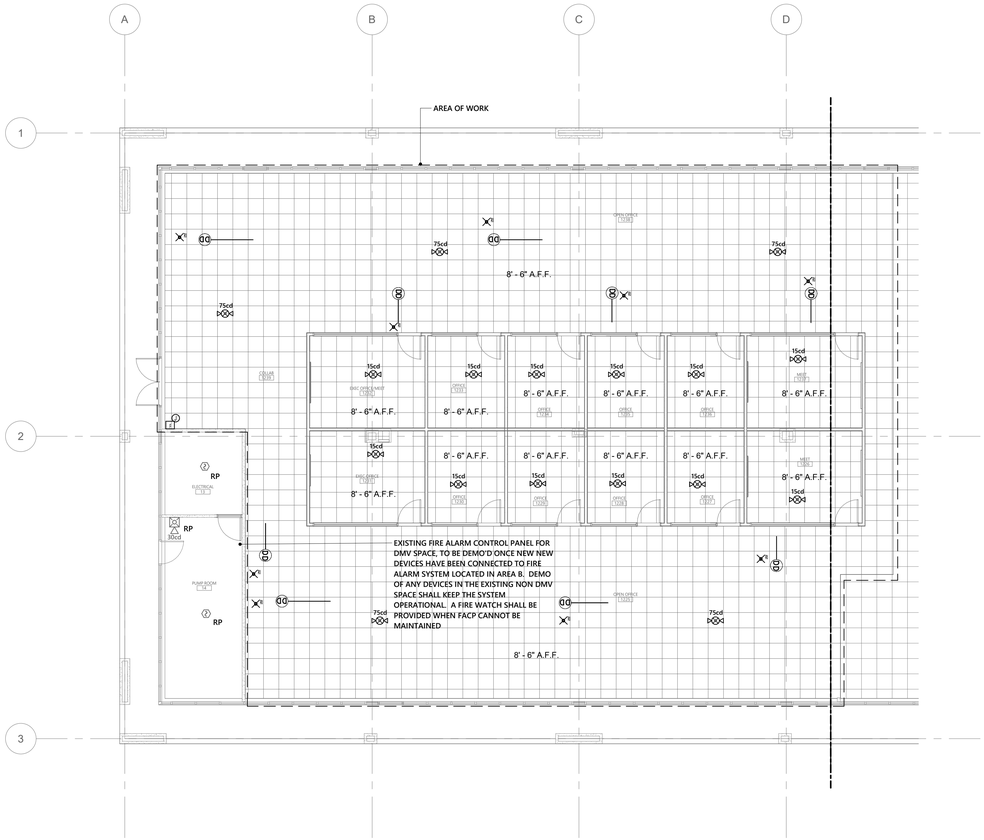
SHEET TITLE
COMPOSITE SOUND MASKING PLAN

SHEET NUMBER
E502

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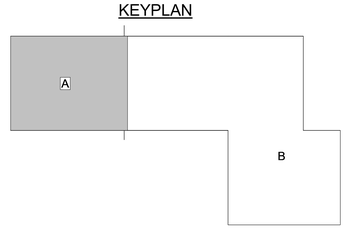


1 ENLARGED FIRE ALARM REFLECTED CEILING PLAN - AREA A
1/8" = 1'-0"

GENERAL NOTES:

1. IT IS THE INTENTION TO NOT PROVIDE ERRC (EMERGENCY RESPONSER RADIO COVERAGE - BDA SYSTEM) FOR THE EXISTING BUILDING PER NCFC 2018 510.2, SECTION DELETION FOR THE REQUIREMENT OF A SYSTEM IN EXISTING BUILDINGS.

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06.16.2025

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CONSTRUCTION

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6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO:
1641630004

SHEET TITLE:
ENLARGED FIRE ALARM PLAN - AREA A

SHEET NUMBER:
E601

Optima Project # 22-0013

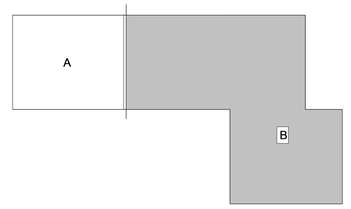
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1 ENLARGED FIRE ALARM REFLECTED CEILING PLAN - AREA B
1/8" = 1'-0"

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CONSTRUCTION

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DESIGN TEAM
Designer

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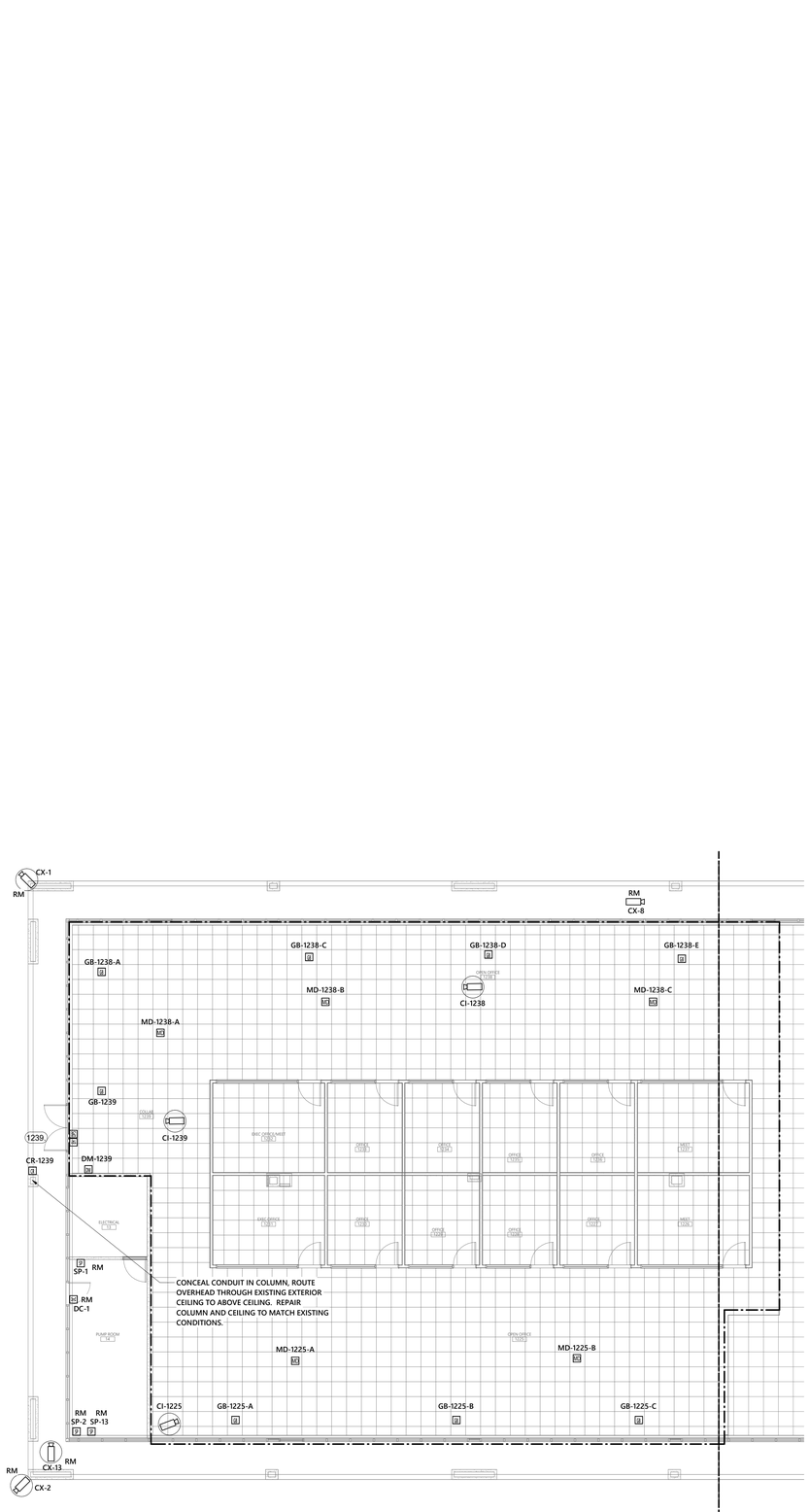
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ENLARGED FIRE ALARM PLAN -AREA B

SHEET NUMBER:
E602

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1 **ENLARGED SECURITY REFLECTED CEILING PLAN - AREA A**

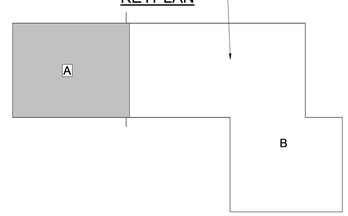
1/8" = 1'-0"

NOTES:

1. PROVIDE (1) ADDITIONAL GENETEC STREAMVAULT 2040E SERIES 1 U 4-BAY APPLIANCE 48TB RAID FOR ADDED VIDEO SURVEILLANCE CAMERAS (EXISTING MDF LOCATION).

NEW POPIT MODULES TO BE LOCATED IN EXISTING MDF, LOCATE ADJACENT EXISTING INTRUSION PANEL

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Designer

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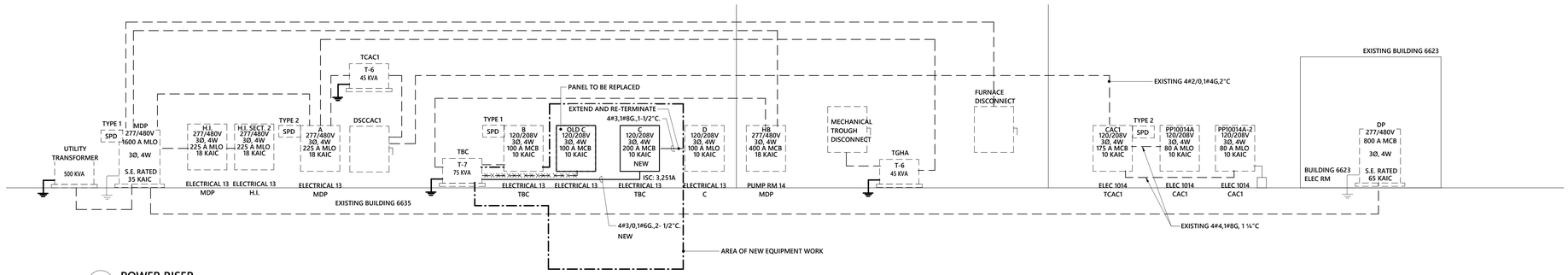
SHEET TITLE:
ENLARGED SECURITY PLAN - AREA A

SHEET NUMBER:
E701

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1 POWER RISER

NOT TO SCALE

RISER NOTES:

1. DASHED LINES INDICATED EXISTING EQUIPMENT OR FEEDER.
2. SOLID LINES INDICATE NEW WORK FOR EQUIPMENT/FEEDERS.
3. DASHED WITH "X" REPRESENTS DEMO ITEM.
4. CONDUCTORS ARE ALL COPPER.

ELECTRICAL EQUIPMENT RISER SCHEDULE

PANEL NAME	SHORT CIRCUIT RATING	Isc Input	Voltage	MAINS	CALCULATED MAXIMUM 80%	TOTAL ESTIMATED DEMAND CIRCUIT	NUMBER OF WIRES	PANEL LOCATION	PANEL FED FROM	Phase Created
MDP	35 KAIC	27400	277/480V	1600 A	1280 A	1003 A	4	ELECTRICAL 13	UTILITY TRANSFORMER	Existing
DP	65 KAIC	28000	277/480V	800 A	640 A	413 A	4		MDP	Existing
HB	18 KAIC	13600	277/480V	400 A	320 A	161 A	4	PUMP RM 14	MDP	Existing
A	18 KAIC	16300	277/480V	225 A	180 A	155 A	4	ELECTRICAL 13	MDP	Existing
H.I.	18 KAIC	14300	277/480V	225 A	180 A	160 A	4	ELECTRICAL 13	MDP	Existing
H.I. SECT. 2	18 KAIC	14300	277/480V	225 A	180 A	113 A	4	ELECTRICAL 13	H.I.	Existing
C	10 KAIC	7300	120/208V	200 A	160 A	105 A	4	ELECTRICAL 13	TBC	New Construction
CAC1	10 KAIC	7300	120/208V	175 A	140 A	121 A	4	ELEC 1014	TCAC1	Existing
B	10 KAIC	7300	120/208V	100 A	80 A	64 A	4	ELECTRICAL 13	TBC	Existing
D	10 KAIC	7300	120/208V	100 A	80 A	23 A	4	ELECTRICAL 13	C	Existing
OLD C	10 KAIC	7300	120/208V	100 A	80 A	0 A	4	ELECTRICAL 13		Existing
PP10014A	10 KAIC	6800	120/208V	80 A	64 A	41 A	4	ELEC 1014	CAC1	Existing
PP10014A-2	10 KAIC	6800	120/208V	80 A	64 A	63 A	4	ELEC 1014	CAC1	Existing

PANEL DESIGNATION	MDP
VOLTAGE	277/480V
AMPERAGE	1600A
DESIGNED LOAD CAP (KVA)	1,063.68
*12 MONTH PEAK DEMAND (KVA)	588.60
REMOVED LOAD (KVA)	107.74
NEW LOAD (KVA)	85.74
NEW TOTAL LOAD (KVA)	566.60

* 12 MONTH PEAK DEMAND PROVIDED BY DUKE POWER ON 06/13/25. THE 12 MONTH PEAK DEMAND EXISTING LOAD FOR PANEL MDP IS CALCULATED PER NEC 220.87

VOLTAGE DROP, CONDUCTOR , AND CONDUIT SIZING TABLE

BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	DISTANCE (FT) VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	DISTANCE(FT) VOLTAGE/POLE 208V - 2P
15A	2#12,1#12G	3/4"	0-60	0-145	3#12,1#12G	3/4"	0-109
	2#10, 1#10G	3/4"	61-99	146-230	3#10, 1#10G	3/4"	110-173
	2#8, 1#8G	3/4"	100-155	231-363	3#8, 1#8G	3/4"	174-272
	2#6, 1#6G	3/4"	156-245	364-565	3#6, 1#6G	3/4"	273-424
	2#4, 1#4G	1"	246-380	566-882	3#4, 1#4G	1"	425-662
	2#3, 1#3G	1-1/4"	381-470	883-1092	3#3, 1#3G	1-1/4"	663-820
	2#2, 1#2G	1-1/4"	471-585	1093-1356	3#2, 1#2G	1-1/4"	821-1018
	2#1, 1#1G	1-1/2"	586-720	1357-1663	3#1, 1#1G	1-1/2"	1019-1248
BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE/POLE 208V - 2P
20A	2#12,1#12G	3/4"	0-45	0-108	3#12,1#12G	3/4"	0-81
	2#10, 1#10G	3/4"	46-75	109-172	3#10, 1#10G	3/4"	82-129
	2#8, 1#8G	3/4"	76-115	173-272	3#8, 1#8G	3/4"	130-204
	2#6, 1#6G	3/4"	116-180	273-424	3#6, 1#6G	3/4"	205-318
	2#4, 1#4G	1"	181-285	425-661	3#4, 1#4G	1"	319-496
	2#3, 1#3G	1-1/4"	286-350	662-819	3#3, 1#3G	1-1/4"	497-615
	2#2, 1#2G	1-1/4"	351-440	820-1017	3#2, 1#2G	1-1/4"	616-763
	2#1, 1#1G	1-1/2"	441-540	1018-1247	3#1, 1#1G	1-1/2"	764-936
BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE/POLE 208V - 2P
30A	2#10, 1#10G	3/4"	0-50	0-115	3#10, 1#10G	3/4"	0-86
	2#8, 1#8G	3/4"	51-78	116-181	3#8, 1#8G	3/4"	87-136
	2#6, 1#6G	3/4"	79-122	182-282	3#6, 1#6G	3/4"	137-212
	2#4, 1#4G	1"	123-190	283-441	3#4, 1#4G	1"	213-331
	2#3, 1#4G	1-1/4"	191-236	442-546	3#3, 1#3G	1-1/4"	332-410
	2#2, 1#2G	1-1/4"	237-292	547-678	3#2, 1#2G	1-1/4"	411-509
	2#1, 1#1G	1-1/2"	293-360	679-831	3#1, 1#1G	1-1/2"	510-624
BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE/POLE 208V - 2P
35A	2#8, 1#10G	3/4"	0-66	0-155	3#8, 1#10G	3/4"	0-116
	2#6, 1#8G	3/4"	67-105	156-242	3#6, 1#8G	3/4"	117-182
	2#4, 1#6G	1"	106-163	243-378	3#4, 1#6G	1"	183-283
	2#3, 1#6G	1"	164-202	379-468	3#3, 1#6G	1"	284-351
	2#2, 1#3G	1"	203-251	469-581	3#2, 1#3G	1-1/4"	352-436
	2#1, 1#3G	1-1/4"	252-308	582-712	3#1, 1#3G	1-1/2"	437-535
BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE/POLE 208V - 2P
40A	2#8, 1#10G	3/4"	0-59	0-136	3#8, 1#10G	3/4"	0-102
	2#6, 1#8G	3/4"	60-92	137-212	3#6, 1#8G	3/4"	103-159
	2#4, 1#6G	1"	93-143	213-330	3#4, 1#6G	1"	160-248
	2#3, 1#4G	1"	144-177	331-409	3#3, 1#4G	1-1/4"	249-307
	2#2, 1#4G	1"	178-220	410-508	3#2, 1#4G	1-1/4"	308-381
	2#1, 1#3G	1-1/4"	221-270	509-623	3#1, 1#3G	1-1/2"	382-468
BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE/POLE 208V - 2P
45A	2#6, 1#10G	3/4"	0-81	0-188	3#6, 1#10G	3/4"	0-141
	2#4, 1#8G	1"	82-128	189-294	3#4, 1#8G	1"	142-220
	2#3, 1#8G	1"	129-157	295-364	3#3, 1#8G	1"	221-273
	2#2, 1#4G	1"	158-195	365-452	3#2, 1#4G	1-1/4"	274-339
	2#1, 1#4G	1-1/4"	196-240	453-554	3#1, 1#4G	1-1/2"	340-416
BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE/POLE 208V - 2P
50A	2#6, 1#10G	3/4"	0-74	0-169	3#6, 1#10G	3/4"	0-127
	2#4, 1#8G	1"	75-114	170-264	3#4, 1#8G	1"	128-198
	2#3, 1#8G	1"	115-141	265-327	3#3, 1#8G	1"	199-246
	2#2, 1#4G	1"	142-175	328-406	3#2, 1#4G	1-1/4"	247-305
	2#1, 1#4G	1-1/4"	176-216	407-498	3#1, 1#4G	1-1/2"	306-374
BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE/POLE 208V - 2P
55A	2#6, 1#10G	3/4"	0-66	0-154	3#6, 1#10G	3/4"	0-115
	2#4, 1#8G	1"	67-104	155-240	3#4, 1#8G	1"	116-180
	2#3, 1#8G	1"	105-129	241-297	3#3, 1#8G	1"	181-223
	2#2, 1#4G	1"	130-160	298-369	3#2, 1#4G	1-1/4"	224-277
	2#1, 1#4G	1-1/4"	161-196	370-453	3#1, 1#4G	1-1/2"	278-340
BREAKER SIZE	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE / POLE 120V-1P	277V-1P	CONDUCTORS (60C)	CONDUIT SIZE	VOLTAGE/POLE 208V - 2P
60A	2#4, 1#10G	3/4"	0-95	0-220	3#4, 1#10G	1"	0-165
	2#3, 1#8G	1"	96-118	221-273	3#3, 1#8G	1"	166-205
	2#2, 1#8G	1"	119-146	274-339	3#2, 1#8G	1-1/4"	206-254
	2#1, 1#6G	1-1/4"	147-180	340-415	3#1, 1#6G	1-1/2"	255-312

NOTES:

1. GROUNDING CONDUCTOR SIZE BASED ON NEC 250.122 (B), LUGS IN A LOCAL JUNCTION BOX TO REDUCE SIZE TO MAKE FINAL CONNECTION AT AN ACCESIBLE CEILING / LOCATION.
2. VOLTAGE DROP BASED ON 60°C CONDUCTORS WITH A MAX CONTINOUS LOADING FOR RESPECTIVE BREAKER (100% LOAD)
3. CONDUIT BASED ON EMT AND SCHEDULE 40 PVC INSTALLATIONS
4. CONDUCTORS BASED ON COPPER.

VOLTAGE DROP, CONDUCTOR , AND CONDUIT SIZING TABLE

BREAKER SIZE	CONDUCTORS (60°C)	CONDUIT	DISTANCE (FT) VOLTAGE / POLE 208V-3P	480V-3P
15A	4#12,1#12G	3/4"	0-125	0-290
	4#10, 1#10G	3/4"	126-199	291-461
	4#8, 1#8G	3/4"	200-314	462-726
	4#6, 1#6G	1"	315-490	727-1132
	4#4, 1#4G	1-1/4"	491-764	1133-1764
	4#3, 1#3G	1-1/4"	765-947	1765-2185
	4#2, 1#2G	1-1/4"	948-1176	2186-2714
	4#1, 1#1G	1-1/2"	1177-1442	2715-3327
20A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#12,1#12G	3/4"	0-94	0-217
	4#10, 1#10G	3/4"	95-149	218-345
	4#8, 1#8G	3/4"	150-236	346-544
	4#6, 1#6G	1"	237-368	545-849
	4#4, 1#4G	1-1/4"	369-573	850-1323
	4#3, 1#3G	1-1/4"	574-710	1324-1639
	4#2, 1#2G	1-1/4"	711-882	1640-2035
	4#1, 1#1G	1-1/2"	883-1081	2036-2495
30A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#10, 1#10G	3/4"	0-99	0-230
	4#8, 1#8G	3/4"	100-157	231-363
	4#6, 1#6G	1"	158-245	364-566
	4#4, 1#4G	1-1/4"	246-382	567-882
	4#3, 1#4G	1-1/4"	383-473	883-1092
	4#2, 1#2G	1-1/4"	474-588	1093-1357
	4#1, 1#1G	1-1/2"	589-721	1358-1663
35A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#8, 1#10G	3/4"	0-134	0-311
	4#6, 1#8G	1"	135-210	312-485
	4#4, 1#6G	1-1/4"	211-327	486-756
	4#3, 1#6G	1-1/4"	328-405	757-936
	4#2, 1#3G	1-1/4"	406-504	937-1163
	4#1, 1#3G	1-1/2"	505-618	1164-1426
40A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#8, 1#10G	3/4"	0-118	0-272
	4#6, 1#8G	1"	119-184	273-424
	4#4, 1#6G	1-1/4"	185-286	425-661
	4#3, 1#6G	1-1/4"	287-355	662-819
	4#2, 1#3G	1-1/4"	356-441	820-1017
	4#1, 1#3G	1-1/2"	442-540	1018-1247
45A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#6, 1#10G	1"	0-163	0-377
	4#4, 1#6G	1-1/4"	164-254	378-588
	4#3, 1#6G	1-1/4"	255-315	589-728
	4#2, 1#4G	1-1/4"	316-392	729-904
	4#1, 1#4G	1-1/2"	393-480	905-1109
50A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#6, 1#10G	1"	0-147	0-339
	4#4, 1#6G	1-1/4"	148-229	340-529
	4#3, 1#6G	1-1/4"	230-284	530-655
	4#2, 1#4G	1-1/4"	285-352	656-814
	4#1, 1#4G	1-1/2"	353-432	815-998

VOLTAGE DROP, CONDUCTOR , AND CONDUIT SIZING TABLE

BREAKER SIZE	CONDUCTORS (60°C)	CONDUIT	DISTANCE (FT) VOLTAGE / POLE 208V-3P	480V-3P
55A	4#6, 1#10G	1"	0-133	0-308
	4#4, 1#6G	1-1/4"	134-208	309-481
	4#3, 1#6G	1-1/4"	209-258	482-596
	4#2, 1#4G	1-1/4"	259-320	597-740
	4#1, 1#4G	1-1/2"	321-393	741-907
60A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208-3P	480V-3P
	4#4, 1#10G	1-1/4"	0-191	0-441
	4#3, 1#8G	1-1/4"	192-236	442-546
	4#2, 1#8G	1-1/4"	237-294	547-678
	4#1, 1#6G	1-1/2"	295-360	679-831
65A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#4, 1#8G	1-1/4"	0-176	0-407
	4#3, 1#6G	1-1/4"	177-218	408-504
	4#2, 1#4G	1-1/4"	219-271	505-626
	4#1, 1#4G	1-1/2"	272-332	627-767
70A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#4, 1#8G	1-1/4"	0-163	0-378
	4#3, 1#6G	1-1/4"	164-202	379-468
	4#2, 1#4G	1-1/4"	203-252	469-581
	4#1, 1#4G	1-1/2"	253-309	582-713
75A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#3, 1#8G	1-1/4"	0-189	0-437
	4#2, 1#6G	1-1/4"	190-235	438-542
	4#1, 1#4G	1-1/2"	236-288	543-665
80A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#3, 1#8G	1-1/4"	0-167	0-385
	4#2, 1#6G	1-1/4"	168-207	386-478
	4#1, 1#4G	1-1/2"	208-254	479-587
85A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#2, 1#6G	1-1/4"	0-196	0-452
	4#2, 1#6G	1-1/2"	197-240	453-554
90A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#2, 1#6G	1-1/4"	0-185	0-428
	4#1, 1#6G	1-1/2"	186-227	429-525
95A	CONDUCTORS (60°C)	CONDUIT	VOLTAGE / POLE 208V-3P	480V-3P
	4#1, 1#6G	1-1/2"	0-216	0-499
100A				

NOTES:

1. GROUNDING CONDUCTOR SIZE BASED ON NEC 250.122 (B), LUGS IN A LOCAL JUNCTION BOX TO REDUCE SIZE TO MAKE FINAL CONNECTION AT AN ACCESIBLE CEILING / LOCATION.
2. VOLTAGE DROP BASED ON 60°C CONDUCTORS WITH A MAX CONTINOUS LOADING FOR RESPECTIVE BREAKER (100% LOAD)
3. CONDUIT BASED ON EMT AND SCHEDULE 40 PVC INSTALLATIONS
4. CONDUCTORS BASED ON COPPER.

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NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
07/07/2025

ISSUE FOR
CONSTRUCTION

ISSUE DATE
06.16.2025

REVISIONS

NO.	REASON	DATE
1	PERMIT COMMENTS	07/07/2025

PROJECT TEAM
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO.
1641630004

SHEET TITLE
POWER RISER DIAGRAM

SHEET NUMBER
E800

Optima Project # 22-0013

7/7/2025 5:14:11 PM

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PANEL: HB

VOLTAGE: 480Y/277 3Ø | **FED FROM:** MDP
MOUNTING: SURFACE | **MAIN TYPE:** MCB | **MFR:**
ENCLOSURE: NEMA1 | **PHASE:** 3 | **TYPE:**
MAIN: 400 A | **WIRE:** 4 | **AIC:** 18 KAIC

LC Abbr	Load Served	Wire	Trip	Ckt No	Pole	A	B	C	Pole	Ckt No	Trip	Wire	Load Served	LC Abbr
				1		1.00 11.00				2				
MISC.	EXISTING TROUGH	EX	30 A	3	3		1.00 11.00		3	4	110 A	EX	EXISTING DOAS-1	V
				5				1.00 11.00		6				
V	WSHP-1237 (NOTE 5)	12	15 A	7		3.32 0.00				8				
				9	3		3.32 0.00		3	10	60 A	-	EXISTING SPARE	Spare
				11				3.32 0.00		12				
Spare	EXISTING SPARE	-	80 A	13		0.00 26.21				14				Other; Sp...
				15	3		0.00 27.90		3	16	125 A	EX	EXISTING PANELS B&C VIA TBC	
				17				0.00 24.73		18				
Spare	EXISTING SPARE	-	20 A	19		0.00 0.00				20				Spare
				21	3		0.00 0.00		3	22	20 A	-	EXISTING SPARE	
				23				0.00 0.00		24				
	EXISTING SPACE	-	--	25	1	-- 3.00			1	26	20 A	EX	EXISITING AHU	M...
MI...	EXISITNG LOAD	EX	20 A	27	1		2.00 --		1	28	--	-	SPACE ONLY	
C...	WSHP-1235 (NOTE 6)	12	15 A	29	1			1.66 3.01	1	30	15 A	12	WSHP-1231 (NOTE 6)	C...
C...	WSHP-1232 (NOTE 6)	12	15 A	31	1	1.38 1.38			1	32	15 A	12	WSHP-1226 (NOTE 6)	C...
	EXISTING SPACE	-	--	33	1		-- 3.30			34				COOLING
	EXISTING SPACE	-	--	35	1			-- 3.30	3	36	15 A	12	WSHP-1238 (NOTE 6)	
COOLING	WSHP-1239 (NOTE 6)	12	15 A	37		3.30 3.30				38				
				39	3		3.30 --		1	40	--	-	EXISTING SPACE	
				41				3.30 --	1	42	--	-	EXISTING SPACE	

	LOAD	Connected Load	Demand Factor	Estimated Demand
L	LIGHTS	1.45 kVA	125.00%	1.81 kVA
LE	LIGHTING - EXTERIOR	0.00 kVA	0.00%	0.00 kVA
H	HEATING	0.00 kVA	0.00%	0.00 kVA
C	COOLING	47.10 kVA	100.00%	47.10 kVA
V	VENTILATION	33.00 kVA	100.00%	33.00 kVA
M	MOTORS	4.08 kVA	100.00%	4.08 kVA
K	KITCHEN	0.00 kVA	0.00%	0.00 kVA
R	RECEPTACLES	56.52 kVA	58.85%	33.26 kVA
WH	WATER HEATER	0.00 kVA	0.00%	0.00 kVA
MS	MISC.	14.17 kVA	100.00%	14.17 kVA
S	Spare	0.00 kVA	0.00%	0.00 kVA
E	ELEVATOR	0.00 kVA	0.00%	0.00 kVA
LD	LAUNDRY	0.00 kVA	0.00%	0.00 kVA
EV	EV CHARGING	0.00 kVA	0.00%	0.00 kVA

NOTES:
1. EXISTING PANEL: PANEL WAS DESIGNED FOR 265.9 KVA.
2. PROVIDE UPDATED TYPED SCHEDULE.
3. TURN OFF ALL UNUSED/SPARE CIRCUIT BREAKERS.
4. BREAKERS ARE EXISTING UNLESS OTHERWISE NOTED.
5. REUSE EXISTING BREAKER.
6. PROVIDE NEW BREAKER.

TOTAL KVA...	157.04 kVA	TOTAL PER PHASE: (CONNECTED)		
TOTAL KVA (DEMAND):	134.14 kVA	194.8 A	187.4 A	185.3 A
TOTAL AMP....	189 A			
TOTAL AMP. (DEMAND):	161 A			

LOAD CLASSIFICATION ABBREVIATIONS (CONT.)
F - FEEDER FOR DOWN STREAM PANEL. LOADS ARE INCLUDED IN THE PANEL LOAD SUMMARY.

PANEL: A

VOLTAGE: 480Y/277 3Ø | **FED FROM:** MDP
MOUNTING: SURFACE | **MAIN TYPE:** MLO | **MFR:** SIEMENS
ENCLOSURE: NEMA1 | **PHASE:** 3 | **TYPE:**
MAIN: 225 A | **WIRE:** 4 | **AIC:** 18 KAIC

LC Abbr	Load Served	Wire	Trip	Ckt No	Pole	A	B	C	Pole	Ckt No	Trip	Wire	Load Served	LC Abbr
Sp...	EXISTING SPARE	-	20 A	1	1	0.00 0.00			1	2	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	3	1		0.00 0.00		1	4	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	5	1			0.00 0.00	1	6	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	7	1	0.00 1.68			1	8	20 A	EX	EXISTING LIGHTS EC - EVAL 1108B	L
Sp...	EXISTING SPARE	-	20 A	9	1		0.00 1.39		1	10	20 A	EX	EXISTING LIGHTS CORRIDOR 1113	L
L	EXISTING EC PRE-K ASSESS 1206	EX	20 A	11	1			1.40 1.50	1	12	15 A	EX	EXISTING EWH -1	H
L	EXISTING LIGHTS COPY/PRINT 1203	EX	20 A	13	1	1.18 0.23			1	14	20 A	EX	EXISTING ELECT ROOM LIGHTS *	L
L	EXISTING LIGHTS COPY/PRINT 1212	EX	20 A	15	1		1.18 0.00		1	16	20 A	-	EXISTING SPARE	Sp...
L	EXISTING EC PRE-K ASSESS 1213	EX	20 A	17	1			1.58 4.50	1	18	25 A	EX	EXISTING WH-1	WH
L	EXISTING LIGHTS CORRIDOR 1019B	EX	20 A	19	1	1.56 3.60			1	20	20 A	EX	EXISTING WSHP-1215	V
				21			1.00 3.60		1	22	20 A	EX	EXISTING WSHP-1208	V
Other	EXISTING SPD	EX	30 A	23	3			1.00 3.60	1	24	20 A	EX	EXISTING WSHP-1012	V
				25		1.00 4.00				26				
V	EXISTING WSHP-1202	EX	20 A	27	1		2.52 4.00		3	28	25 A	EX	EXISTING CHILLER TOWER	C
V	EXISTING WSHP-1112	EX	20 A	29	1			2.52 4.00		30				
V	EXISTING WSHP-1110	EX	20 A	31	1	2.52 16.06				32				
	EXISTING SPACE ONLY	-	--	33	1		-- 19.49		3	34	70 A	EX	EXISTING PANEL CAC1 VIA TCAC1	F
	EXISTING SPACE ONLY	-	--	35	1			-- 18.43		36				
	EXISTING SPACE ONLY	-	--	37	1	-- 11.00				38				
	EXISTING SPACE ONLY	-	--	39	1		-- 11.00		3	40	100 A	EX	EXISTING MECHANICAL TGHA	F
	EXISTING SPACE ONLY	-	--	41	1			-- 11.00		42				

	LOAD	Connected Load	Demand Factor	Estimated Demand
L	LIGHTS	10.19 kVA	125.00%	12.74 kVA
LE	LIGHTING - EXTERIOR	0.00 kVA	0.00%	0.00 kVA
H	HEATING	3.50 kVA	100.00%	3.50 kVA
C	COOLING	12.00 kVA	100.00%	12.00 kVA
V	VENTILATION	18.36 kVA	100.00%	18.36 kVA
M	MOTORS	0.50 kVA	100.00%	0.50 kVA
K	KITCHEN	0.00 kVA	0.00%	0.00 kVA
R	RECEPTACLES	30.82 kVA	66.22%	20.41 kVA
WH	WATER HEATER	4.50 kVA	100.00%	4.50 kVA
MS	MISC.	17.66 kVA	100.00%	17.66 kVA
S	Spare	0.00 kVA	0.00%	0.00 kVA
E	ELEVATOR	0.00 kVA	0.00%	0.00 kVA
LD	LAUNDRY	0.00 kVA	0.00%	0.00 kVA
EV	EV CHARGING	0.00 kVA	0.00%	0.00 kVA

NOTES:
1. EXISTING PANEL: PANEL WAS DESIGNED FOR 149 KVA.
2. PROVIDE UPDATED TYPED SCHEDULE.
3. TURN OFF ALL UNUSED/SPARE CIRCUIT BREAKERS.
4. BREAKERS ARE EXISTING UNLESS OTHERWISE NOTED.

* . UNIT EMERGENCY BATTERY FIXTURE PART OF CIRCUIT. PROVIDE INDICATOR ON SCHEDULE AND LOCK ON DEVICE HANDLE.

TOTAL KVA...	136.53 kVA	TOTAL PER PHASE: (CONNECTED)		
TOTAL KVA (DEMAND):	128.67 kVA	154.6 A	160.2 A	179.5 A
TOTAL AMP....	164 A			
TOTAL AMP. (DEMAND):	155 A			

LOAD CLASSIFICATION ABBREVIATIONS (CONT.)
F - FEEDER FOR DOWN STREAM PANEL. LOADS ARE INCLUDED IN THE PANEL LOAD SUMMARY.

PANEL: MDP

VOLTAGE: 480Y/277 3Ø | **FED FROM:** UTILITY TRANSFORMER
MOUNTING: SURFACE | **MAIN TYPE:** MLO | **MFR:**
ENCLOSURE: NEMA1 | **PHASE:** 3 | **TYPE:**
MAIN: 1600 A | **WIRE:** 4 | **AIC:** 35 KAIC

LC Abbr	Load Served	Wire	Trip	Ckt No	Pole	A	B	C	Pole	Ckt No	Trip	Wire	Load Served	LC Abbr
				1		42.83 53.89				2				
F	EXISTING PANEL A	EX	250 A	3	3		44.18 51.82		3	4	400 A	EX	EXISTING PANEL HB	F
				5				49.52 51.32		6				
F	EXISTING PANEL H.I.	EX	225 A	7		46.18 33.33				8				
				9	3		42.80 33.33		3	10	300 A	EX	EXISTING FURNACE	H
				11				42.90 33.33		12				
				13		114.33 --			1	14	--	-	DP BREAKER SPACE	
F	EXISTING PANEL DP	EX	800 A	15	3		114.33 --		1	16	--	-	DP BREAKER SPACE	
				17				114.33 --	1	18	--	-	DP BREAKER SPACE	
	EXISTING SPACE ONLY	-	--	19	1	--				20				
	EXISTING SPACE ONLY	-	--	21	1		--			22				
	EXISTING SPACE ONLY	-	--	23	1			--		24				
				25						26				
				27						28				
				29						30				
				31						32				
				33						34				
				35						36				
				37						38				
				39						40				
				41						42				

	LOAD	Connected Load	Demand Factor	Estimated Demand
L	LIGHTS	14.91 kVA	125.00%	18.64 kVA
LE	LIGHTING - EXTERIOR	0.00 kVA	0.00%	0.00 kVA
H	HEATING	446.50 kVA	100.00%	446.50 kVA
C	COOLING	76.55 kVA	100.00%	76.55 kVA
V	VENTILATION	156.52 kVA	100.00%	156.52 kVA
M	MOTORS	4.58 kVA	100.00%	4.58 kVA
K	KITCHEN	0.00 kVA	0.00%	0.00 kVA
R	RECEPTACLES	87.34 kVA	55.72%	48.67 kVA
WH	WATER HEATER	4.50 kVA	100.00%	4.50 kVA
MS	MISC.	31.83 kVA	100.00%	31.83 kVA
S	Spare	0.00 kVA	0.00%	0.00 kVA
E	ELEVATOR	0.00 kVA	0.00%	0.00 kVA
LD	LAUNDRY	0.00 kVA	0.00%	0.00 kVA
EV	EV CHARGING	0.00 kVA	0.00%	0.00 kVA

NOTES:
1. EXISTING PANEL.
2. PROVIDE PHENOLIC LABELS FOR EXISTING SUB FEEDER BREAKERS.
3. EXISTING PANEL IS DESIGNED FOR 1329 KVA.
4. ALL INCOMING PANEL & BRKR LUGS SHALL MATCH FEEDERS.
5. THIS PANEL IS U.L. LISTED FOR USE AS S.E. EQUIP.
6. EXISTING SERVICE DISCONNECTS (5) SERVICE DISCONNECT BREAKERS.

TOTAL KVA...	868.45 kVA	TOTAL PER PHASE: (CONNECTED)		
TOTAL KVA (DEMAND):	833.51 kVA	1051.3 A	1034.2 A	1054.3 A
TOTAL AMP....	1045 A			
TOTAL AMP. (DEMAND):	1003 A			

LOAD CLASSIFICATION ABBREVIATIONS (CONT.)
F - FEEDER FOR DOWN STREAM PANEL. LOADS ARE INCLUDED IN THE PANEL LOAD SUMMARY.

PANEL: D

VOLTAGE: 208Y/120 3Ø | **FED FROM:** C
MOUNTING: SURFACE | **MAIN TYPE:** MLO | **MFR:**
ENCLOSURE: NEMA1 | **PHASE:** 3 | **TYPE:**
MAIN: 100 A | **WIRE:** 4 | **AIC:** 10 KAIC

LC Abbr	Load Served	Wire	Trip	Ckt No	Pole	A	B	C	Pole	Ckt No	Trip	Wire	Load Served	LC Abbr
LI...	EX.LIGHTING CONTROL	EX	20 A	1	1	0.15 0.36			1	2	20 A	EX	EX. LOAD	MS
LI...	EX. EXTERIOR LIGHTING	EX	20 A	3	1		0.15 0.36		1	4	20 A	EX	EX. LOAD	MS
LI...	EX. EXTERIOR LIGHTING	EX	20 A	5	1			0.15 0.00	1	6	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	7	1	0.00 --			1	8	--	-	EXISTING SPACE	
Sp...	EXISTING SPARE	-	20 A	9	1		0.00 0.18		1	10	20 A	EX	TIME CLOCK TO REMAIN	MS
Sp...	EXISTING SPARE	-	20 A	11	1			0.00 0.00	1	12	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	13	1	0.00 0.00			1	14	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	15	1		0.00 0.00		1	16	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	17	1			0.00 0.00	1	18	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	19	1	0.00 0.00			1	20	20 A	-	EXISTING SPARE	Sp...
Sp...	EXISTING SPARE	-	20 A	21	1		0.00 0.00		1	22	20 A	-	EXISTING SPARE	Sp...
MI...	EX. LOAD	EX	20 A	23	1			0.36 0.00	1	24	20 A	-	EXISTING SPARE	Sp...
MI...	EX. LOAD	EX	20 A	25	1	0.36 0.00			1	26	20 A	-	EXISTING SPARE	Sp...
MS	EX - DRYER - LAUNDRY 1012 (GFCI)	EX	30 A	27	2		1.50 1.50		2	28	30 A	EX	EX - DRYER - LAUNDRY 1012 (GFCI)	MS
				29				1.50 1.50		30				

	LOAD	Connected Load	Demand Factor	Estimated Demand
L	LIGHTS	0.45 kVA	125.00%	0.56 kVA
LE	LIGHTING - EXTERIOR	0.00 kVA	0.00%	0.00 kVA
H	HEATING	0.00 kVA	0.00%	0.00 kVA
C	COOLING	0.00 kVA	0.00%	0.00 kVA
V	VENTILATION	0.00 kVA	0.00%	0.00 kVA
M	MOTORS	0.00 kVA	0.00%	0.00 kVA
K	KITCHEN	0.00 kVA	0.00%	0.00 kVA
R	RECEPTACLES	0.00 kVA	0.00%	0.00 kVA
WH	WATER HEATER	0.00 kVA	0.00%	0.00 kVA
MS	MISC.	7.62 kVA	100.00%	7.62 kVA
S	Spare	0.00 kVA	0.00%	0.00 kVA
E	ELEVATOR	0.00 kVA	0.00%	0.00 kVA
LD	LAUNDRY	0.00 kVA	0.00%	0.00 kVA
EV	EV CHARGING	0.00 kVA	0.00%	0.00 kVA

NOTES:
1. EXISTING PANEL IS TO REMAIN AS IS.

TOTAL KVA...	8.07 kVA	TOTAL PER PHASE: (CONNECTED)		
TOTAL KVA (DEMAND):	8.18 kVA	7.3 A	34.1 A	32.6 A
TOTAL AMP....	22 A			
TOTAL AMP. (DEMAND):	23 A			

LOAD CLASSIFICATION ABBREVIATIONS (CONT.)
F - FEEDER FOR DOWN STREAM PANEL. LOADS ARE INCLUDED IN THE PANEL LOAD SUMMARY.

PANEL: B

VOLTAGE: 208Y/120 3Ø | **FED FROM:** TBC
MOUNTING: SURFACE | **MAIN TYPE:** MCB | **MFR:** GOULD
ENCLOSURE: NEMA1 | **PHASE:** 3 | **TYPE:**
MAIN: 100 A | **WIRE:** 4 | **AIC:** 10 KAIC

LC Abbr	Load Served	Wire	Trip	Ckt No	Pole	A	B	C	Pole	Ckt No	Trip	Wire	Load Served	LC Abbr
R	EXISTING REC - OPEN OFFICE 1206	EX	20 A	2	1	1.08 1.08			2	4	20 A	EX	EXISTING: REC - OPEN OFFICE 1206	R
							1.08 1.08							
MS	EXISTING CR OPEN OFFICE 1206	EX	20 A	5	1			0.10 0.75	1	6	20 A	EX	EX - COPIER COPY/PRINT 1212	MS
R	EX - REC - COPY/PRINT 1212	EX	20 A	7	1	0.36 1.08			1	8	20 A	12	FLR REC OPEN OFFICE 1238	R...
R	EX - REC - EC PRE-K ASSESS 1205	EX	20 A	9	1		0.90 0.18		1	10	20 A	EX	EX - REC - EC PRE-K ASSESS 1206	R
R	EX - REC - EC PRE-K ASSESS 1213	EX	20 A	11	1			1.08 0.00	1	12	20 A	-	EXISTING SPARE	Sp...
R	EX - REC - EC INVENTORY 1208	EX	20 A	13	1	1.80 1.08			1	14	20 A	EX	EX - REC - OPEN OFFICE 1206	R
R	EX - REC - EC PRE-K ASSESS 1214	EX	20 A	15	1		0.90 0.72		1	16	20 A	12	ABOVE CEILING REC OPEN 1238	R...
R	EX - REC - EC PRE-K ASSESS 1204	EX	20 A	17	1			0.72 0.18	1	18	20 A	12	REC - PUMP RM 14	R
R	EX - REC - MEET 1202	EX	20 A	19	1	0.72 0.00			1	20	20 A	-	EXISTING SPARE	Sp...
R	EX - REC - EC SHARED MEET 1215	EX	20 A	21	1		1.08 0.36		1	22	20 A	12	REC - ELEC 13	R
R	EX - REC - FOCUS 1223	EX	20 A	23	1			1.08 2.70	2	24	25 A	10	EXISITING - ODU-1	C
R	EX - REC - RECEPTACLES OFFICE 1216	EX	20 A	25	1	0.72 2.70				26				
R	EX - REC - COPY/PRINT 1212	EX	20 A	27	1		0.18 1.80		1	28	20 A	12	EX - REC - MEET 1210/1211	R
R	EX - REC - MEET 1207	EX	20 A	29	1			0.90 1.08	1	30	20 A	EX	EX - OPEN OFFICE 1206	R
				31		0.12 1.08			1	32	20 A	EX	EX - REC - OPEN OFFICE 1206	R
F	EXISTING MAIN	EX	100 A	33	3		0.12 0.36		1	34	20 A	EX	EX - ROOF TOP REC.	OT...
				35				0.12 0.00	1	36	20 A	-	EXISTING SPARE	Sp...

	LOAD	Connected Load	Demand Factor	Estimated Demand
L	LIGHTS	0.00 kVA	0.00%	0.00 kVA
LE	LIGHTING - EXTERIOR	0.00 kVA	0.00%	0.00 kVA
H	HEATING	0.00 kVA	0.00%	0.00 kVA
C	COOLING	5.40 kVA	100.00%	5.40 kVA
V	VENTILATION	0.00 kVA	0.00%	0.00 kVA
M	MOTORS	0.00 kVA	0.00%	0.00 kVA
K	KITCHEN	0.00 kVA	0.00%	0.00 kVA
R	RECEPTACLES	22.32 kVA	72.40%	16.16 kVA
WH	WATER HEATER	0.00 kVA	0.00%	0.00 kVA
MS	MISC.	0.85 kVA	100.00%	0.85 kVA
S	Spare	0.00 kVA	0.00%	0.00 kVA
E	ELEVATOR	0.00 kVA	0.00%	0.00 kVA
LD	LAUNDRY	0.00 kVA	0.00%	0.00 kVA
EV	EV CHARGING	0.00 kVA	0.00%	0.00 kVA

NOTES:
1. EXISTING PANEL: PANEL WAS DESIGNED FOR 28.8 KVA.
2. PROVIDE UPDATED TYPED SCHEDULE.
3. TURN OFF ALL UNUSED/SPARE CIRCUIT BREAKERS.
4. BREAKERS ARE EXISTING UNLESS OTHERWISE NOTED.
5. REMOVE EXISTING HANDLE TIE.

TOTAL KVA...	29.29 kVA	TOTAL PER PHASE: (CONNECTED)		
TOTAL KVA (DEMAND):	23.13 kVA	98.6 A	73.1 A	72.6 A
TOTAL AMP....	81 A			
TOTAL AMP. (DEMAND):	64 A			

LOAD CLASSIFICATION ABBREVIATIONS (CONT.)
F - FEEDER FOR DOWN STREAM PANEL. LOADS ARE INCLUDED IN THE PANEL LOAD SUMMARY.

PANEL: C

VOLTAGE: 208Y/120 3Ø | **FED FROM:** TBC
MOUNTING: SURFACE | **MAIN TYPE:** MCB | **MFR:**
ENCLOSURE: NEMA1 | **PHASE:** 3 | **TYPE:**
MAIN: 200 A | **WIRE:** 4 | **AIC:** 10 KAIC

LC Abbr	Load Served	Wire	Trip	Ckt No	Pole	A	B	C	Pole	Ckt No	Trip	Wire	Load Served	LC Abbr
R...	RECEPTACLES Room 1234, 1233	12	20 A	1	1	1.44 0.87				2				
R...	REC EXEC OFFICE/MEET 1232	12	20 A	3	1		1.44 3.69		3	4	100 A	SR	EX. PANEL D	F
R...	RECEPTACLES Room 1236, 1235	12	20 A	5	1			1.44 3.51		6				
R...	RECEPTACLES MEET 1237	12	20 A	7	1	1.26 1.26			1	8	20 A	12	RECEPTACLES MEET 1226	R...
R...	RECEPTACLES Room 1228, 1227	12	20 A	9	1		1.44 1.44		1	10	20 A	12	RECEPTACLES Room 1230, 1229	R...
R...	RECEPTACLES EXEC OFFICE 1231	12	20 A	11	1			1.08 0.50	1	12	20 A	12	PRINTER EXEC 1231	MI...
R...	FLOOR REC OPEN OFFICE 1225	12	20 A	13	1	1.08 1.08			2	14	20 A	12	FLR REC OPEN OFFICE 1225	RE C...
C	EX. A/C CONTROLLER	8	40 A	15	2		2.25 1.08			16				
				17				2.25 1.00	1	18	20 A	12	EX LIGHTING CONTACTOR CTRL	LI...
RE C...	FLR REC OPEN OFFICE 1225	12	20 A	19	2	1.08 0.72			1	20	20 A	12	EX - REC PUMP ROOM	R...
				21			1.08 0.72		1	22	20 A	12	EX - REC ELEC RM	R...
RE C...	FLR REC OPEN OFFICE 1225	12	20 A	23	2			1.08 1.08	2	24	20 A	12	FLR REC OPEN OFFICE 1238	RE C...
				25		1.08 1.08				26				
RE C...	FLR REC OPEN OFFICE 1238	12	20 A	27	2		1.08 1.08		2	28	20 A	12	FLR REC OPEN OFFICE 1225	RE C...
				29				1.08 1.08		30				
RE C...	FLR REC OPEN OFFICE 1238	12	20 A	31	2	1.08 0.20			1	32	20 A	12	DOOR HARDWARE POWER	MI...
				33			1.08 0.60		1	34	15 A	12	CONDENSATE PUMPS (NOTE 8)	M...
R...	RECEPTACLES COLLAB 1239	12	20 A	35	1			0.54 0.48	1	36	15 A	12	CONDENSATE PUMPS (NOTE 8)	M...
RE C...	FLR REC OPEN OFFICE 1238	12	20 A	37	2	1.08 1.08			2	38	20 A	12	FLR REC OPEN OFFICE 1225	RE C...
				39			1.08 1.08			40				
R...	RECEPTACLES CORRIDOR 1019A	12	20 A	41	1			0.36 0.54	1	42	20 A	12	ABOVE CEILING REC OPEN 1225	R...

	LOAD	Connected Load	Demand Factor	Estimated Demand
L	LIGHTS	1.45 kVA	125.00%	1.81 kVA
LE	LIGHTING - EXTERIOR	0.00 kVA	0.00%	0.00 kVA
H	HEATING	0.00 kVA	0.00%	0.00 kVA
C	COOLING	4.50 kVA	100.00%	4.50 kVA
V	VENTILATION	0.00 kVA	0.00%	0.00 kVA
M	MOTORS	1.08 kVA	100.00%	1.08 kVA
K	KITCHEN	0.00 kVA	0.00%	0.00 kVA
R	RECEPTACLES	34.20 kVA	64.62%	22.10 kVA
WH	WATER HEATER	0.00 kVA	0.00%	0.00 kVA
MS	MISC.	8.32 kVA	100.00%	8.32 kVA
S	Spare	0.00 kVA	0.00%	0.00 kVA
E	ELEVATOR	0.00 kVA	0.00%	0.00 kVA
LD	LAUNDRY	0.00 kVA	0.00%	0.00 kVA
EV	EV CHARGING	0.00 kVA	0.00%	0.00 kVA

NOTES:
1. BREAKER FRAME SHALL BE AS REQ'D PER PANEL AIC RATING.
2. SHALL BE FULLY RATED - SERIES RATINGS NOT ALLOWED.
3. ALL BUSSING, INCL GND AND NEUTRAL, SHALL BE COPPER.
4. ALL INCOMING PANEL & BRKR LUGS SHALL MATCH FEEDERS.
5. PROVIDE HINGED DOOR-IN-DOOR WITH OUTER DOOR LOCK.
6. PROVIDE METAL DIRECTORY FRAME.
7. LOADS WITH 'EX' WIRE SIZE ARE EXISTING CIRCUITS OF OLD PANEL 'C'. RELOCATE CIRCUITS TO REMAIN TO NEW PANEL.
8. PROVIDE 6mA GFCI BRKR (CLASS A - PERSONNEL) (250' MAX).

TOTAL KVA...	49.55 kVA	TOTAL PER PHASE: (CONNECTED)		
TOTAL KVA (DEMAND):	37.81 kVA	119.9 A	161.6 A	135.6 A
TOTAL AMP....	138 A			
TOTAL AMP. (DEMAND):	105 A			

LOAD CLASSIFICATION ABBREVIATIONS (CONT.)
F - FEEDER FOR DOWN STREAM PANEL. LOADS ARE INCLUDED IN THE PANEL LOAD SUMMARY.
SR - REFER TO RISER

HB | A | MDP
D | B | C

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06.16.2025

ISSUE FOR:
CONSTRUCTION

ISSUE DATE
06.16.2025

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO.
1641630004

SHEET TITLE
PANEL SCHEDULES

SHEET NUMBER
E801

Optima Project # 22-0013

6/13/2025 2:42:45 PM

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PANEL: H.I.

VOLTAGE: 480Y/277 3Ø | **FED FROM:** MDP
MOUNTING: SURFACE | **MAIN TYPE:** MLO | **MFR:** SIEMENS
ENCLOSURE: NEMA1 | **PHASE:** 3 | **TYPE:**
MAIN: 225 A | **WIRE:** 4 | **AIC:** 18 KAIC

LC Abbr	Load Served	Wire	Trip	Ckt No	Pole	A		B		C		Pole	Ckt No	Trip	Wire	Load Served	LC Abbr
				1		3.32	0.00						2				
V	WSHP-1225A (NOTE 5)	12	15 A	3	3			3.32	0.00			3	4	15 A	12	EXISTING SPARE	Spare
				5						3.32	0.00		6				
				7		2.49	0.00						8				
V	WSHP-1225B (NOTE 5)	12	15 A	9	3			2.49	0.00			3	10	15 A	12	EXISTING SPARE	Spare
				11						2.49	0.00		12				
				13		0.00	2.77						14				
Spare	EXISTING SPARE	12	15 A	15	3			0.00	2.77			3	16	15 A	EX	EXISTING WSHP-1113	V
				17						0.00	2.77		18				
				19		1.00	1.00						20				
Other	EXISTING LOAD	EX	15 A	21	3			1.00	1.00			3	22	30 A	EX	EXISTING WSHP 1206B	V
				23						1.00	1.00		24				
Ot...	EXISTING LOAD	12	20 A	25	1	3.00	0.00						26				
Li...	LTS - 1225A, 1225, 1029 (NOTE 6) *	12	20 A	27	1			0.93	0.00			3	28	30 A	EX	EXISTING SPD	Other
Li...	LIGHTING 1238,1239(NOTE 6) *	12	20 A	29	1					1.03	0.00		30				
Li...	LIGHTING OFFICE/MEET (NOTE 6)	12	20 A	31	1	1.31	--					1	32	--	-	EXISTING SPACE	
	EXISTING SPACE	-	--	33	1			--	--			1	34	--	-	EXISTING SPACE	
	EXISTING SPACE	-	--	35	1					--	--	1	36	--	-	EXISTING SPACE	

	LOAD	Connected Load	Demand Factor	Estimated Demand
L	LIGHTS	3.27 kVA	125.00%	4.09 kVA
LE	LIGHTING - EXTERIOR	0.00 kVA	0.00%	0.00 kVA
H	HEATING	0.00 kVA	0.00%	0.00 kVA
C	COOLING	17.45 kVA	100.00%	17.45 kVA
V	VENTILATION	105.16 kVA	100.00%	105.16 kVA
M	MOTORS	0.00 kVA	0.00%	0.00 kVA
K	KITCHEN	0.00 kVA	0.00%	0.00 kVA
R	RECEPTACLES	0.00 kVA	0.00%	0.00 kVA
WH	WATER HEATER	0.00 kVA	0.00%	0.00 kVA
MS	MISC.	0.00 kVA	0.00%	0.00 kVA
S	Spare	0.00 kVA	0.00%	0.00 kVA
E	ELEVATOR	0.00 kVA	0.00%	0.00 kVA
LD	LAUNDRY	0.00 kVA	0.00%	0.00 kVA
EV	EV CHARGING	0.00 kVA	0.00%	0.00 kVA

NOTES:
1. EXISTING PANEL. PANEL WAS DESIGNED FOR 149 kVA.
2. PROVIDE UPDATED TYPED SCHEDULE.
3. TURN OFF ALL UNUSED/SPARE CIRCUIT BREAKERS.
4. BREAKERS ARE EXISTING UNLESS OTHERWISE NOTED.
5. REUSE EXISTING BREAKER.
6. PROVIDE NEW BREAKER.
* - UNIT EMERGENCY BATTERY FIXTURE PART OF CIRCUIT. PROVIDE INDICATOR ON SCHEDULE AND LOCK ON DEVICE HANDLE.

TOTAL KVA...	131.88 kVA	TOTAL PER PHASE: (CONNECTED)		
TOTAL KVA (DEMAND):	132.70 kVA	166.8 A	154.5 A	154.9 A
TOTAL AMP....	159 A			
TOTAL AMP. (DEMAND):	160 A			

LOAD CLASSIFICATION ABBREVIATIONS (CONT.)
F - FEEDER FOR DOWN STREAM PANEL. LOADS ARE INCLUDED IN THE PANEL LOAD SUMMARY.

PANEL: H.I. SECT. 2

VOLTAGE: 480Y/277 3Ø | **FED FROM:** H.I.
MOUNTING: SURFACE | **MAIN TYPE:** MLO | **MFR:** SIEMENS
ENCLOSURE: NEMA1 | **PHASE:** 3 | **TYPE:**
MAIN: 225 A | **WIRE:** 4 | **AIC:** 18 KAIC

LC Abbr	Load Served	Wire	Trip	Ckt No	Pole	A		B		C		Pole	Ckt No	Trip	Wire	Load Served	LC Abbr
				1		1.66	2.49						2				
V	EXISTING WSHP-1002	EX	15 A	3	3			1.66	2.49			3	4	15 A	EX	EXISTING WSHP-1001	V
				5						1.66	2.49		6				
				7		2.77	2.77						8				
V	EXISTING WSHP-1216	EX	15 A	9	3			2.77	2.77			3	10	15 A	EX	EXISTING WHSP-1213	V
				11						2.77	2.77		12				
				13		1.94	1.94						14				
V	EXISTING WSHP-1206A	EX	15 A	15	3			1.94	1.94			3	16	15 A	EX	EXISTING WSHP-1206B	V
				17						1.94	1.94		18				
				19		1.66	2.49						20				
V	EXISTING WSHP-1211	EX	15 A	21	3			1.66	2.49			3	22	15 A	EX	EXISTING WSHP-1018	V
				23						1.66	2.49		24				
				25		2.77	2.77						26				
V	EXISTING WSHP-1205	EX	15 A	27	3			2.77	2.77			3	28	15 A	EX	EXISTING WSHP-1201	V
				29						2.77	2.77		30				
				31		1.94	2.77						32				
V	EXISTING WSHP-1102	EX	15 A	33	3			1.94	2.77			3	34	15 A	EX	EXISTING WSHP-1108A	V
				35						1.94	2.77		36				
				37		1.66	1.66						38				
V	EXISTING WSHP-1108B	EX	15 A	39	3			1.66	1.66			3	40	15 A	EX	EXISTING WSHP-1103	V
				41						1.66	1.66		42				

	LOAD	Connected Load	Demand Factor	Estimated Demand
L	LIGHTS	0.00 kVA	0.00%	0.00 kVA
LE	LIGHTING - EXTERIOR	0.00 kVA	0.00%	0.00 kVA
H	HEATING	0.00 kVA	0.00%	0.00 kVA
C	COOLING	0.00 kVA	0.00%	0.00 kVA
V	VENTILATION	93.85 kVA	100.00%	93.85 kVA
M	MOTORS	0.00 kVA	0.00%	0.00 kVA
K	KITCHEN	0.00 kVA	0.00%	0.00 kVA
R	RECEPTACLES	0.00 kVA	0.00%	0.00 kVA
WH	WATER HEATER	0.00 kVA	0.00%	0.00 kVA
MS	MISC.	0.00 kVA	0.00%	0.00 kVA
S	Spare	0.00 kVA	0.00%	0.00 kVA
E	ELEVATOR	0.00 kVA	0.00%	0.00 kVA
LD	LAUNDRY	0.00 kVA	0.00%	0.00 kVA
EV	EV CHARGING	0.00 kVA	0.00%	0.00 kVA

NOTES:
1. PANEL EXISTING. NO WORK. FOR REFERENCE ONLY.

TOTAL KVA...	93.85 kVA	TOTAL PER PHASE: (CONNECTED)		
TOTAL KVA (DEMAND):	93.85 kVA	112.9 A	112.9 A	112.9 A
TOTAL AMP....	113 A			
TOTAL AMP. (DEMAND):	113 A			

LOAD CLASSIFICATION ABBREVIATIONS (CONT.)
F - FEEDER FOR DOWN STREAM PANEL. LOADS ARE INCLUDED IN THE PANEL LOAD SUMMARY.

H.I.

H.I. SECT. 2

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NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
06.16.2025

ISSUE FOR
CONSTRUCTION

ISSUE DATE
06.16.2025

REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO
1641630004

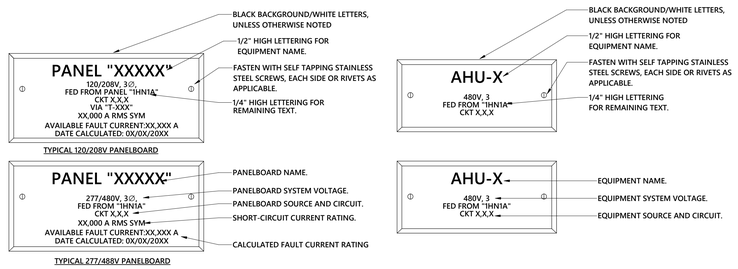
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PANEL SCHEDULES

SHEET NUMBER
E802

Optima Project # 22-0013

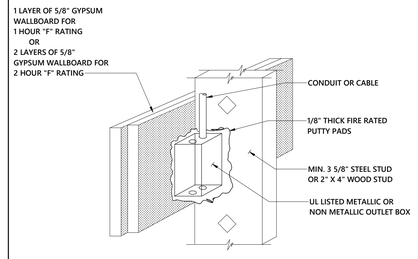
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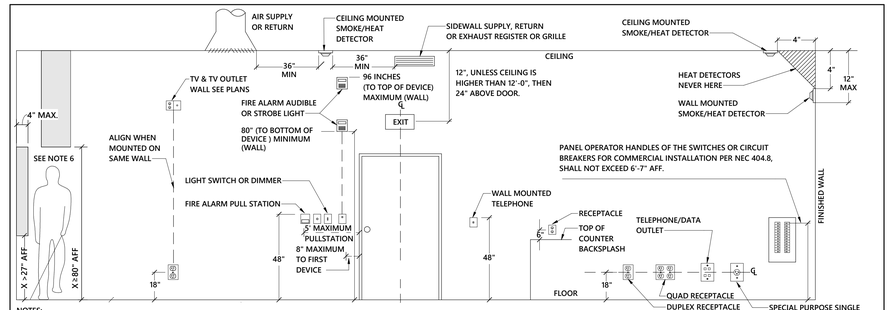
NOTES:
1. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS, COLORS, ETC.
2. PROVIDE SHORT-CIRCUIT CURRENT RATING AND AVAILABLE FAULT CURRENT ON EACH NON-DWELLING SERVICE EQUIPMENT NAMEPLATE.

3 TYPICAL NAMEPLATE DIAGRAM
NOT TO SCALE



NOTES:
1. REQUIRED FOR METALLIC AND NON-METALLIC ELECTRICAL BOXES EXCEEDING 16 SQ. INCHES IN AREA OR MULTIPLE BOXES SERVING SAME SPACE.
2. REQUIRED FOR BACK TO BACK BOXES IN THE SAME STUD CAVITY.
3. REQUIRED FOR BOXES EXCEEDING 100 SQ INCHES TOTAL IN 100 SQ FEET OF WALL AREA.
4. THE USE OF PUTTY PADS ADHERENCE IS AT THE DISCRETION OF THE LOCAL AUTHORITY HAVING JURISDICTION.
5. REFER TO UL LISTING OF WALL FOR ADDITIONAL RESTRICTIONS OR INFORMATION.

2 WALL OUTLET DETAIL
NOT TO SCALE



NOTES:
1. LOCATIONS WHERE TV MOUNT IS BACK TO BACK ON SAME WALL, AN OFFSET OF 8-12" WILL BE NEEDED FOR INSTALLATION OF JACK/RECEPTACLE.
2. DEVICES ABOVE COUNTER TOPS SHALL BE A MAXIMUM OF 48" TO TOP OF DEVICE.
3. DEVICES NEXT TO DOOR EXIT SHALL BE WITHIN 8" (MAXIMUM) TYPICAL OF DOOR UNLESS OBSTACLES SUCH AS SIDELITES, ETC.
4. DEVICES REQUIRED TO BE ADA ACCESSIBLE SHALL BE INSTALLED PER ANSI A117.1.
5. ALL METALLIC & NON-METALLIC, SWITCH AND RECEPTACLE BOXES INSTALLED IN FRAME WALLS SHALL INCLUDE APPROVED FIRESTOP PUTTY PADS APPPLIED ON THE BACK AND ALL SIDES OF BOX NOT TOUCHING THE WOOD STUD.

1 MOUNTING HEIGHTS OF DEVICES - ELEVATION
NOT TO SCALE

KEYED NOTES:
1. INSTALL #6 AWG GREEN JACKET, THHN TYPE COPPER TELECOM EQUIPMENT BONDING CONDUTOR WITH 2-HOLE LONG BARREL IRREVERSIBLE CRIMP CONNECTOR ON ONE END AND A IRREVERSIBLE CRIMP TYPE CONNECTION.
2. INSTALL #6 AWG GREEN JACKET, THHN TYPE COPPER BONDING CONDUCTOR WITH 2-HOLE LONG BARREL IRREVERSIBLE CRIMP CONNECTORS ON BOTH ENDS, FROM THE PBB OR SBB TO THE STRUCTURAL STEEL.
3. INSTALL GREEN JACKET, THHN TYPE COPPER TELECOM BONDING BACKBONE CONDUCTOR. USE 2-HOLE LONG BARREL IRREVERSIBLE CRIMP CONNECTORS AND IRREVERSIBLE CABLE CRIMP CONNECTORS ON ENDS OF CONDUCTORS. SIZE CONDUCTOR IAW TIA-607-D TBB CHART.
4. SEE TELECOM DRAWINGS.
5. INSTALL PRIMARY BONDING BUSBAR (PBB) NEAR THE BACKBONE CABLING AND ASSOCIATED TERMINATIONS. PRIMARY BONDING BUSBAR SHALL BE MOUNTED AT 80" TO THE TTB PLYWOOD WITH MINIMUM 2" STANDOFFS. SEE TELECOMMUNICATIONS GROUNDING BAR DETAIL.
6. NOT USED.
7. INSTALL #3/0 AWG, GREEN JACKET, THHN TYPE COPPER BONDING CONDUCTOR WITH 2-HOLE LONG BARREL IRREVERSIBLE CRIMP CONNECTOR ON ONE END, FROM THE MGB IN THE MAIN ELECTRICAL ROOM TO THE PRIMARY BUS BAR (PBB).

TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (PBB), 24"Lx2"Wx1/4"T CU. PROVIDE 1#6G (INSULATED), 1/2"C AND BOND TO BUILDING STEEL AND MAIN GROUNDING ELECTRODE SYSTEM AT SERVICE ENTRANCE EQUIPMENT. SBB AT EACH IDF/DATA ROOM 12"XX2"WX1/4"T CU.

MAIN GROUND BAR (MGB) SHALL BE THE SAME DIMENSIONS AS THE PBB.

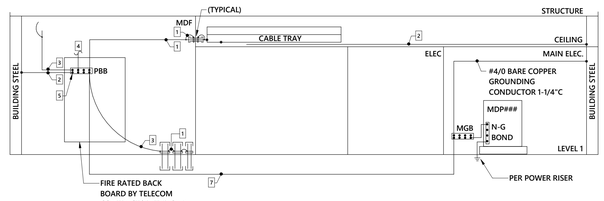
GENERAL NOTES:
1. FLOOR PLANS INDICATE THE EXACT QUANTITY AND LOCATION OF ALL COMPONENTS.
2. SEE PLANS FOR HEAD END LOCATION, AND DISTRIBUTION CLOSETS.
3. METALLIC CONDUIT TO AND FROM CABLE TRAY SHALL BE GROUNDED PER NEC 392.
4. SEE SITE PLAN FOR ALL SERVICE ENTRANCE CONDUIT.

CONDUIT SLEEVE LEGEND (UNLESS OTHERWISE DENOTED ON THE PLANS)

CONFERENCE ROOMS — (2) 1" CONDUIT SLEEVES BY E.C.
CABLE TRAY BREAKS — (4) 4" CONDUIT SLEEVES BY E.C.
ALL OTHER SPACES — AS DENOTED ON THE PLANS

TELECOM BACKBONE BONDING CONDUCTOR SIZE VS LENGTH TABLE	
TBB/GE LINEAR LENGTH	TBB/GE SIZE (AWG) (CU)
13	6
14-20	4
21-26	3
27-33	2
34-41	1
42-52	1/0
53-66	2/0
67-84	3/0
85-105	4/0
106-125	250 KCMIL
126-150	300 KCMIL
151-175	350 KCMIL
176-250	500 KCMIL
251-300	600 KCMIL
GREATER THAN 301	750 KCMIL

NOTES:
A. TBB SIZING PER LATEST EDITION OF TIA-607-D
B. THE MINIMUM TBB CONDUCTOR SIZE SHALL BE A NO.6 AMERICAN WIRE GAUGE (AWG)



4 TELECOMMUNICATIONS GROUNDING AND PATHWAY RISER DIAGRAM
NO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
06.16.2025

ISSUE FOR: CONSTRUCTION
ISSUE DATE: 06.16.2025
REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE: Ashley Hall
PROJECT MANAGER: Lynn Guimaraes
DESIGN TEAM: Designer

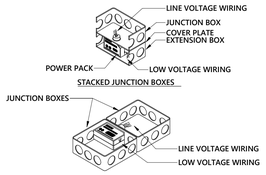
PROJECT NAME: CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO: 1641630004
SHEET TITLE: ELECTRICAL DETAILS
SHEET NUMBER: E811

Optima Project # 22-0013

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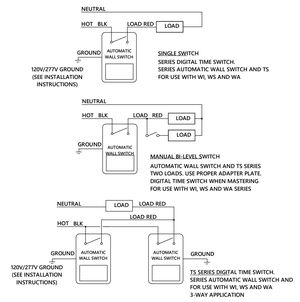
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NOTE:
DO NOT MOUNT POWER PACKS CLOSER THAN 6-12 INCHES FROM SENSOR. PROVIDE DOUBLE STACKED JUNCTION BOX FOR MAXIMUM VENTILATION OF POWER PACK. PROVIDE BLANK COVER. WHERE PERMITTED BY CODE AND AHJ, LEAVE (2) OPENINGS IN CONDUIT KNOCKOUT FOR VENTING OF POWER PACK. VERIFY WITH AHJ PRIOR TO KNOCKOUT REMOVAL.

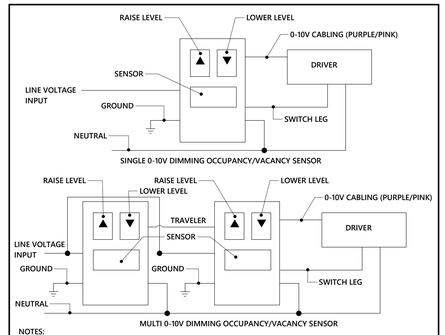
POWER PACK INSTALLED IN J-BOX

4 POWER PACK INSTALLATION
NOT TO SCALE



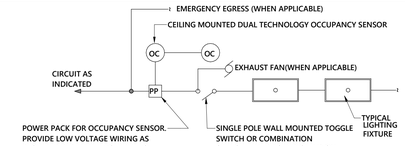
*WHEN THESE SWITCHES ARE WIRED IN A THREE-WAY WIRING CONFIGURATION THEY WILL ONLY OPERATE AS THREE-WAY SWITCHES IF THEY ARE LEFT IN AUTOMATIC MODE. IF ONE SWITCH IS TURNED OFF, THE LIGHTS WILL NOT COME AUTOMATICALLY ON UNTIL THAT SWITCH IS TURN BACK TO THE AUTOMATIC POSITION.

3 SINGLE POLE OCC. SENSOR SWITCH
NOT TO SCALE



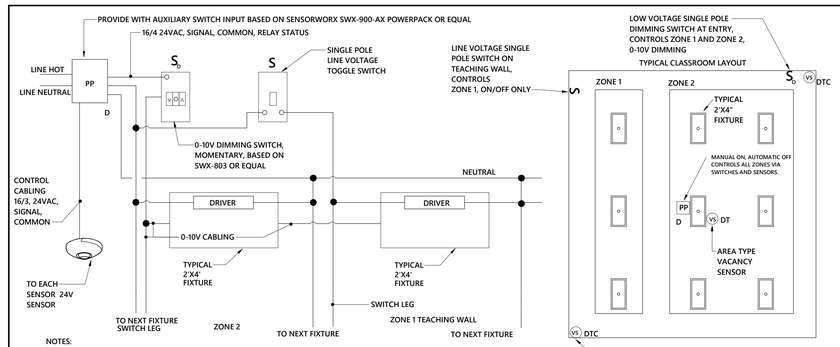
NOTES:
1. MOST MANUFACTURERS ONLY PROVIDE SINGLE SWITCH SENSOR WITH DIMMING SENSOR IN THREE WAY. WHERE THREE WAY TO THREE WAY DIMMING SWITCHES ARE REQUIRED, PROVIDE WATTSTOPPER DW-311 OR EQUAL.
2. WHERE LISTED AS VACANCY, SET FOR MANUAL ON, AUTOMATIC OFF.
3. ADJUST SENSITIVITY TO MAX SETTING.
4. SEE PLANS AND SPECIFICATIONS FOR TIMER SETTING. IF NO SETTING LISTED, 15 MINUTE SHALL BE BASIS.

2 DIMMING OCCUPANCY SWITCH 0-10V
NO SCALE



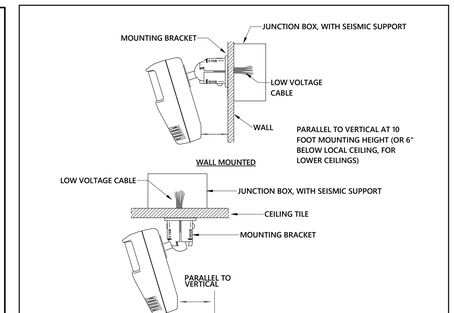
NOTES:
1. OCCUPANCY SENSORS SHALL BE SET TO TIME OUT AFTER 15 MINUTES AND THE TRIM POTENTIOMETER IS SET TO 90% FOR SENSITIVITY.
2. OCCUPANCY SENSORS SHALL BE PLACED AS TO NOT FUNCTION UPON SOMEONE JUST PASSING BY THE ROOM DOOR BUT BY ACTUALLY ENTERING THE ROOM IN AS MUCH AS POSSIBLE.

1 TYPICAL CEILING MOUNTED OCCUPANCY SENSOR WIRING DIAGRAMS
NOT TO SCALE



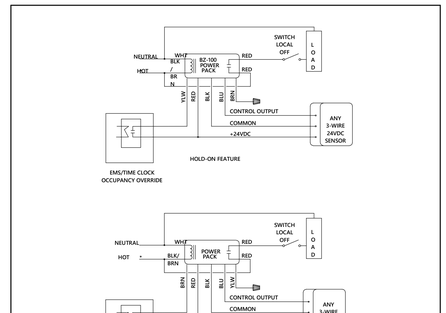
NOTES:
1. 0-10V SWITCH CONTROLS ALL FIXTURES FOR BOTH ON/OFF AND DIMMING.
2. SINGLE POLE SWITCH AT TEACHER WALL IS FOR MANUAL OFF OVERRIDE OF ZONE 1. MUST BE ON FOR ZONE 1 TO BE ON.
3. SEE PLANS FOR SENSOR TYPE, QUANTITY, AND LOCATIONS.
4. VACANCY (MANUAL ON VIA DIMMER SWITCH, AUTOMATIC OFF). DIMMER SWITCH AND SENSOR MUST BOTH BE ON/ACTIVATED FOR SINGLE POLE SWITCH TO TURN POWER ON.
5. DIMMING RETAINS LAST SETTING.

7 SWITCH CONTROL - DIMMING
NO SCALE



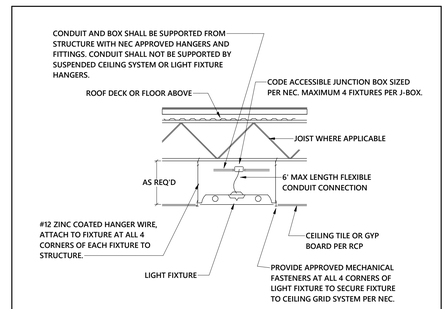
NOTES:
1. TILT SENSOR TOWARD CENTER OF ROOM FOR MAXIMUM EFFECTIVENESS.
2. CALIBRATE SENSITIVITY AND DIRECTION AFTER INSTALLATION.
3. PROVIDE WALL MOUNT BRACKET AND INSTALL AT CORNER MOST SECTION OF ROOM. PATTERN IS BASED ON CONICAL SHAPE.

6 CORNER MOUNT SENSOR
NOT TO SCALE



NOTE: CONNECT ONLY THE SUPPLY FOR THE VOLTAGE BEING USED. CAP UNUSED POWER SUPPLY WIRE.

5 POWER PACK WIRING DIAGRAM
NOT TO SCALE



NOTES:
1. WHERE ROOF DECKING IS THE IS THE ALLOWABLE SUPPORT STRUCTURE, AND PATHWAY SYSTEM IS NOT IMC OR RMC, THE MINIMUM DISTANCE FROM ROOF DECKING SHALL BE 1.5" FOR ALL BOXES AND CONDUIT.

8 TYPICAL LAY-IN FIXTURE DIAGRAM
NOT TO SCALE

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NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
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PROJECT TEAM:
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME:
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
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CHARLOTTE, NC 28212

PROJECT NO:
1641630004

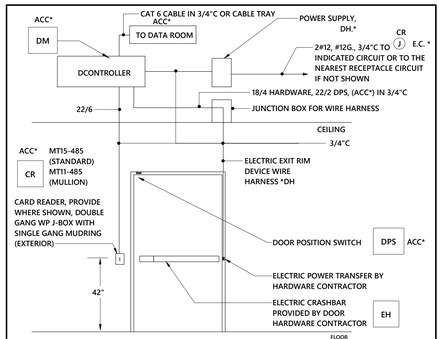
SHEET TITLE:
LIGHTING DETAILS

SHEET NUMBER:
E812

Optima Project # 22-0013

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NOTES:
1. SEE SPECIFICATIONS FOR ALL CABLING AND DEVICE REQUIREMENTS.
2. ACC* - INDICATES BY ACCESS CONTROL SECURITY CONTRACTOR. E.C.* - INDICATES BY ELECTRICAL CONTRACTOR. DH* INDICATES BY DOOR HARDWARE CONTRACTOR.
3. E.C. SHALL PROVIDE ALL PATHWAYS FOR SYSTEM. E.C. SHALL PROVIDE ALL JUNCTION BOXES FOR SYSTEM UNLESS OTHERWISE NOTED.

4 CARD READER D-CONTROLLER - EXTERIOR
NO SCALE

5 RECESSED CAMERA MOUNTING DETAILS FOR RCP GRID
NO SCALE

INTRUSION DISTRIBUTION EQUIPMENT		
EQUIPMENT	ROOM NAME	ROOM NUMBER
INTRUSION PANEL AND POPIT CANS	MDF ROOM	1209

INTRUSION DETECTION SCHEDULE - MOTION DETECTION

DEVICE ID	ROOM NAME	ROOM NUMBER	DEVICE MOUNT	DEVICE TYPE	CABLING ZONE	Ceiling Height
MD-1225-A	OPEN OFFICE	1225	CEILING	CEILING - 360	MDF 1209	8' - 6"
MD-1225-B	OPEN OFFICE	1225	CEILING	CEILING - 360	MDF 1209	8' - 6"
MD-1238-A	OPEN OFFICE	1238	CEILING	CEILING - 360	MDF 1209	8' - 6"
MD-1238-B	OPEN OFFICE	1238	CEILING	CEILING - 360	MDF 1209	8' - 6"
MD-1238-C	OPEN OFFICE	1238	CEILING	CEILING - 360	MDF 1209	8' - 6"

INTRUSION DETECTION SCHEDULE - GLASS BREAKS

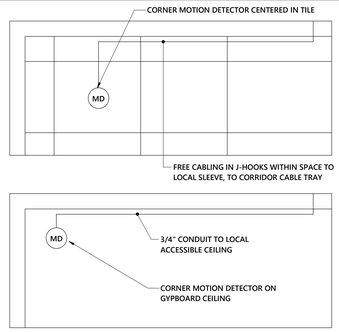
DEVICE ID	ROOM NAME	ROOM NUMBER	DEVICE MOUNT	DEVICE TYPE	CABLING ZONE	Elevation Tag
GB-1225-A	OPEN OFFICE	1225A	CEILING	STANDARD	MDF 1209	8' - 6"
GB-1225-B	OPEN OFFICE	1225A	CEILING	STANDARD	MDF 1209	8' - 6"
GB-1225-C	OPEN OFFICE	1225A	CEILING	STANDARD	MDF 1209	8' - 6"
GB-1238-A	OPEN OFFICE	1238	CEILING	STANDARD	MDF 1209	8' - 6"
GB-1238-C	OPEN OFFICE	1238	CEILING	STANDARD	MDF 1209	8' - 6"
GB-1238-D	OPEN OFFICE	1238	CEILING	STANDARD	MDF 1209	8' - 6"
GB-1238-E	OPEN OFFICE	1238	CEILING	STANDARD	MDF 1209	8' - 6"
GB-1239	CORRIDOR	1029	CEILING	STANDARD	MDF 1209	8' - 6"

CARD ACCESS SCHEDULE

DEVICE ID	CABLING ZONE	DETAIL	DEVICE MOUNT	DOOR TAG
CR-1239	1209	#4/E813	STANDARD	DOOR 1239

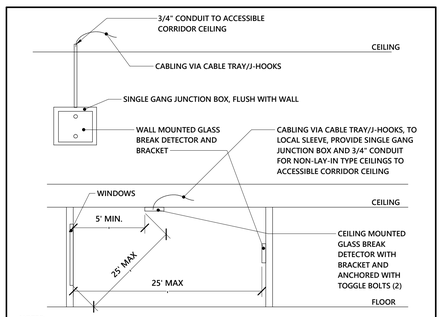
VIDEO SURVEILLANCE SCHEDULE - INTERIOR

DEVICE ID	ROOM NAME	ROOM NUMBER	CAMERA TYPE	DEVICE MOUNT	CABLING ZONE	HEIGHT	CABLING TYPE
CI-1225	OPEN OFFICE	1225A	TYPE 6	CEILING	1209	8' - 6"	CAT 6
CI-1238	OPEN OFFICE	1238	TYPE 6	CEILING	1209	8' - 6"	CAT 6
CI-1239	COLLAB	1239	TYPE 6	CEILING	1209	8' - 6"	CAT 6



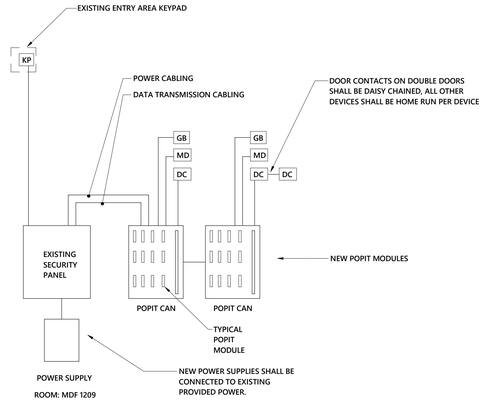
NOTES:
1. PROVIDE JUNCTION BOX/BACKBOX AS REQUIRED PER MANUFACTURER.
2. CORNER MOUNT DETECTORS ARE TO BE MOUNTED IN CORNER TO MAXIMIZE COVERAGE. AVOID CASEWORK THAY MAY BLOCK DETECTOR.
3. ALL CONDUIT AND CABLING SHALL BE CONCEALED.
4. SEE SPECIFICATIONS FOR CABLING AND DEVICE REQUIREMENTS.

2 CEILING MOTION DETECTION - CORNER DETAIL - INTRUSION
NOT TO SCALE



NOTES:
1. 8' AFF UNLESS OTHERWISE NOTED.
2. ALL CONDUIT AND CABLING SHALL BE CONCEALED.
3. JUNCTION BOX SHALL BE FLUSH WITH WALL.
4. SEE SPECIFICATIONS FOR CABLING AND DEVICE REQUIREMENTS.
5. WHEN WALL MOUNTED, MOUNT ON OPPOSITE WALL FROM GLASS, NO MORE THAN 25' FROM GLASS EXTENT.
6. CEILING MOUNTED DETECTORS SHALL BE A MINIMUM OF 5' FROM GLASS WALL AND NO MORE THAN 25' FROM GLASS EXTENT.

1 WALL/CEILING MOUNTED GLASS BREAK - INTRUSION DETAIL
NOT TO SCALE



GENERAL NOTES:
1. SEE SPECIFICATIONS FOR CABLING, DEVICE, AND EQUIPMENT REQUIREMENTS.
2. SEE PLANS AND SCHEDULES FOR DEVICE QUANTITIES.

3 INTRUSION DETECTION RISER

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NORTH CAROLINA PROFESSIONAL SEAL 058965 ENGINEER MICHAEL MAZZONE
06.16.2025

ISSUE FOR: CONSTRUCTION
ISSUE DATE: 06.16.2025
REVISIONS

NO.	REASON	DATE

PROJECT TEAM
PRINCIPAL IN CHARGE: Ashley Hall
PROJECT MANAGER: Lynn Guimaraes
DESIGN TEAM: Designer

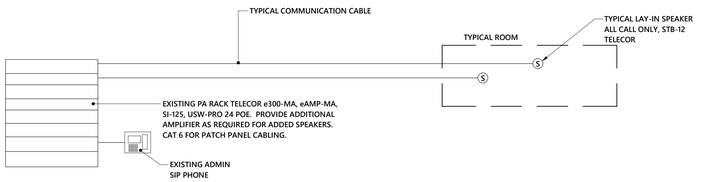
PROJECT NAME: CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO: 1641630004
SHEET TITLE: SECURITY - INTRUSION DETECTION, VIDEO SURVEILLANCE AND ACCESS CONTROL DETAILS
SHEET NUMBER: E813

Optima Project # 22-0013

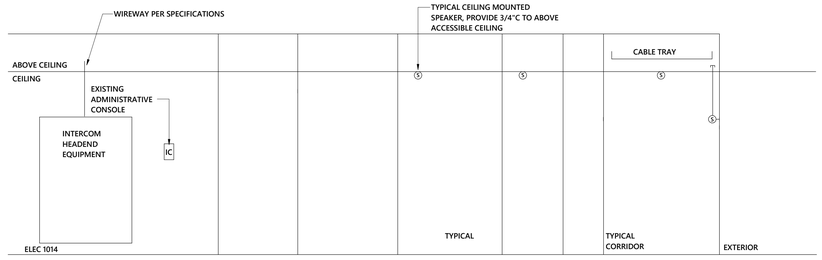
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NOTES:
1. THE INTERCOM SYSTEM SHALL BE INSTALLED COMPLETE, WITH ALL EQUIPMENT, DEVICES, COMPONENTS, CABLE AND WIRING SYSTEMS, INTERFACE MODULES, ETC., READY FOR OPERATION. SEE INTERCOM SPECIFICATION 275123.50 FOR ALL REQUIREMENTS OF EQUIPMENT, LABELING, CONDUCTOR TYPES, CONDUCTOR SIZES, METHODS, AND REQUIREMENTS.
2. ALL EQUIPMENT AND DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, APPLICABLE STANDARDS AND ACCESSIBLE FOR VISUAL INSPECTION AND MAINTENANCE. WIRING DIAGRAMS SHALL BE SECURED FROM THE SYSTEM MANUFACTURER AND INSTALLED ACCORDINGLY TO MEET THE SPECIFIED OPERATION.
3. SEE FLOOR PLANS FOR LOCATION AND QUANTITIES.

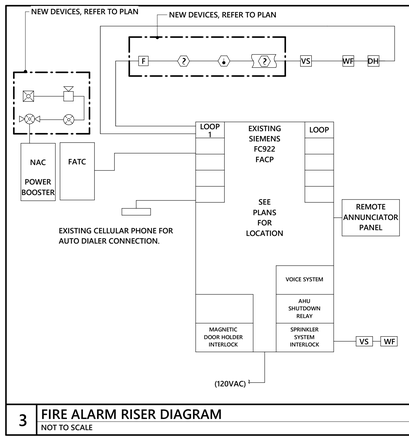
1 PA - RISER DETAIL
NO SCALE



NOTES:
1. QUANTITIES OF DEVICES TO BE INSTALLED ARE AS LOCATED ON ELECTRICAL DRAWINGS AND AS PER PLANS AND SPECIFICATIONS.
2. SEE SPECIFICATIONS FOR ALL EQUIPMENT, CABLING, DEVICES, SPEAKERS, SURGE PROTECTION, ETC.
3. TERMINATIONS SHALL BE LOCATED IN EQUIPMENT OR REMOTE TERMINAL CABINETS IN THE LOCAL ELECTRICAL ROOM. COORDINATE WITH ELECTRICAL CONTRACTOR FOR EXACT LOCATIONS.
4. PROVIDE CONNECTIONS TO THE TELEPHONE/DATA SYSTEM AS REQUIRED PER THE SPECIFICATIONS.
5. ALL CONDUIT SHALL BE A MINIMUM OF 3/4" UNLESS OTHERWISE SPECIFIED.
6. WHERE NO SLEEVES ARE PROVIDED TO LOCAL SPEAKER, INTERCOM, VOLUME CONTROL, ETC. PROVIDE PATHWAY TO LOCAL CABLE TRAY.
7. SEE SPECIFICATIONS FOR ALL REQUIRED SPEAKER BACKBOXES.
8. ELECTRICAL CONTRACTOR SHALL PROVIDE J-HOOKS ABOVE CEILING WHERE CABLE TRAY IS NOT PROVIDED IN CONCEALED ACCESSIBLE AREAS.

2 PA - DETAIL
NO SCALE

FIRE ALARM SYSTEM MATRIX	BUILDING SYSTEM OUTPUTS																											CENTRAL COMM	
	ACTIVATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE AUDIBLE ALARM SIGNAL	ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTIVATE AUDIBLE SUPERVISORY SIGNAL	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE AUDIBLE TROUBLE SIGNAL	DISPLAY GENERAL ALARM STATUS	ACTIVATE CLOSURE OF DOORS	ACTIVATE EXTERIOR HORN/STROBES	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	SHUT DOWN RESPECTIVE HVAC	RELEASE DOOR HOLDERS (LOCAL DETECTOR ONLY)	RELEASE ROLLING FIRE DOOR (LOCAL DETECTOR ONLY)	ACTIVATE ELEVATOR LIGHTS (LOCAL DETECTOR ONLY)	SMOKE/FIRE DAMPERS (LOCAL DETECTOR ONLY)	ACTIVATE EMERG. THEATRICAL LTG (HOUSE)	SIGNAL OVERRIDE FOR AUDIO SYSTEMS (INTERCOM/SOUND SY.)	SHOW CHANGE OF STATUS ON CENTRAL PANEL	SHOW CHANGE OF STATUS ON ANNUNCIATOR	SHOW OVERRIDE FOR AUDIO SYSTEMS (INTERCOM/SOUND SY.)	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION		
MANUAL FIRE ALARM PULL BOXES	X	X					X	X	X	X							X	X	X	X	X	X	X					
BUILDING SMOKE/HEAT DETECTOR	X	X					X	X	X	X						X	X	X	X	X	X	X	X	X				
DUCT SMOKE DETECTOR			X	X				X			X					X							X	X		X		
SPRINKLER WATER FLOW	X	X					X	X	X	X								X		X	X	X	X	X				
SPRINKLER TAMPER			X	X				X			X												X	X		X		
NOTIFICATION DEVICE SHORT CIRCUIT					X	X		X				X											X	X				
OPEN CIRCUIT					X	X		X				X											X	X			X	
GROUND FAULT					X	X		X				X											X	X			X	
FIRE ALARM A.C. POWER FAILURE					X	X		X				X							X				X	X			X	
FIRE ALARM SYSTEM LOW BATTERY					X			X				X											X	X			X	



3 FIRE ALARM RISER DIAGRAM
NOT TO SCALE

FIRE ALARM NOTES

1. EXISTING FACP SIEMENS FC922.
2. FACP SHALL BE ADDRESSABLE.
3. FACP SHALL BE CONNECTED TO A UL APPROVED CENTRAL STATION.
4. ZONE PER NFPA 72, 2013 AND MANUFACTURER'S RECOMMENDATIONS WITH NO ONE ZONE EXCEEDING 15,000 S.F. PER FLOOR.
5. COORDINATE QUANTITY AND LOCATIONS OF DEVICES WITH CONTRACT DRAWINGS.
6. LOCATE SMOKE DETECTOR WITHIN 5' OF THE MAGNETIC HOLD OPEN DOORS. (TYPICAL)
7. LOCATE FIRE ALARM PULL STATION WITHIN 5' OF THE EXIT DOOR.
8. LOCATE SMOKE/HEAT DETECTOR WITHIN 5' OF THE FA EQUIPMENT (FACP, FATC, NAC).
9. LOCATION OF CEILING MOUNTED SMOKE/HEAT DETECTOR SHALL BE FIELD COORDINATED PRIOR TO ROUGH IN. THE DETECTOR SHALL BE A MINIMUM OF 2' AWAY FROM LIGHT FIXTURE AND A MINIMUM OF 3' AWAY FROM AIR DISTRIBUTION DEVICES.
10. NOT USED.
11. ACTIVATION OF AN ALARM ZONE SHALL CAUSE LOCAL AIR HANDLING EQUIPMENT TO SHUT DOWN (ALL DAMPERS, AIR HANDLERS AND EXHAUST FANS MUST STOP).
12. NOT USED.
13. NOT USED.
14. ALL VISUAL DEVICES WITHIN THE SAME AREA SHALL BE SYNCHRONIZED.
15. ALL FIRE ALARM WIRING SHALL BE IN METALIC CONDUIT OR APPROVED FIRE ALARM MC CABLE WHERE ABOVE ACCESSIBLE CEILING. SEE SPECIFICATIONS.
16. VOICE SYSTEM.
17. THE FIRE ALARM SYSTEM MANUFACTURER SHALL PROVIDE NOTIFICATION APPLIANCE CIRCUIT (NAC) POWER EXTENDERS AS REQUIRED.
18. THE DUCT SMOKE DETECTORS SHALL COMPLY WITH IFC 907.2.12.1.2 AND 907.3.1.
19. NOT USED.
20. NOT USED.
21. PROVIDE REMOTE LIGHT WITH TEST SWITCH FOR DUCT SMOKE DETECTOR ON CEILING WHERE UNIT IS ABOVE CEILING.
22. PROVIDE FIRE WATCH DURING ANY FIRE ALARM SHUTDOWN. FIRE WATCH REQUIREMENTS SHALL BE PER MECKLENBURG COUNTY FIRE MARSHAL'S OFFICE AS DEFINED IN NCSBC SECTION 202. AT A MINIMUM THE FIRE WATCH INCLUDES: NOTIFICATION TO FIRE MARSHAL OFFICE, PERSONNEL LOG AND MONITORING, PATROL (TWICE HOURLY), FIRE WATCH CHECKLIST, AND PATROL LOG.
"A TEMPORARY MEASURE INTENDED TO ENSURE CONTINUOUS AND SYSTEMATIC SURVEILLANCE OF A BUILDING OR PORTION THEREOF BY ONE OR MORE QUALIFIED INDIVIDUALS FOR THE PURPOSES OF IDENTIFYING AND CONTROLLING FIRE HAZARDS, DETECTING EARLY SIGNS OF UNWANTED FIRE, RAISING AN ALARM OF FIRE AND NOTIFYING THE OCCUPANTS AND THE FIRE DEPARTMENT"
23. CONTRACTOR RESPONSIBLE FOR SHOP DRAWINGS AS REQUIRED BY LOCAL AHJ.
24. DUCT DETECTORS SHALL BE VERIFIED WITH THE MECHANICAL DRAWINGS FOR QUANTITY AND LOCATION. TOTAL QUANTITY MINIMUM SHALL BE BASED ON BOTH MECHANICAL SCHEDULES AND MECHANICAL PLAN LOCATIONS AND ELECTRICAL PLANS. WHEN DEVICE QUANTITIES (ELECTRICAL VS. MECHANICAL) ARE IN CONFLICT, PROVIDE THE GREATER QUANTITY OF DETECTORS.

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PROJECT TEAM
PRINCIPAL IN CHARGE
Ashley Hall
PROJECT MANAGER
Lynn Guimaraes
DESIGN TEAM
Designer

PROJECT NAME
CMS STUDENT & FAMILY SUPPORT CENTER - BUILDING 6635
6635 EXECUTIVE CR.
CHARLOTTE, NC 28212

PROJECT NO.
1641630004

SHEET TITLE
ELECTRICAL DETAILS - FIRE ALARM AND INTERCOM

SHEET NUMBER
E814

Optima Project # 22-0013

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