DE <sup>N</sup> LIGHT SWITCHES, WALL MOUNTED OO			ELECTRICAL DEVICES
LIGHT SWITCHES, WALL MOUNTED OC	/ICE		MOUNTING HEIGHTS
	CCUPANCY SENSORS		ERLINE OF BOX. 44" MAXIMUM TO TOP ABOVE COUNTERS WHICH ARE
WALL MOUNTED EXIT SIGNS		90" TO CENT OF DOOR AN	ERLINE OF SIGN OR CENTERED IN WALL AREA BETWEEN TOP ID CEILING.
CEILING MOUNTED EXIT SIGNS		80" TO BOTT	OM FIXTURE.
RECEPTACLES		16" TO BOTT EXCEPTION: 20"-25"D.	OM OF BOX. 44" MAXIMUM TO TOP ABOVE COUNTERS WHICH ARE
SPECIAL OUTLETS OR RECEPTACLES			OM OF BOX OR AS NOTED ON DRAWINGS. EXCEPTION: 44" D TOP ABOVE COUNTERS WHICH ARE 20"-25"D.
PLUGMOLD OR WIREMOLD			N DRAWINGS. 44" MAXIMUM TO TOP ABOVE COUNTERS WHICH ARE
DATA/COMMUNICATION OR TELEPHO	NE OUTLETS	16" TO BOTTO	OM OF BOX.
TELEPHONE OUTLETS - WALL TYPE			CENTER (NON-ACCESSIBLE). EST OPERABLE PART (ACCESSIBLE).
FIRE ALARM MANUAL PULL STATIONS		48" TO CENT	ERLINE OF BOX - NOT MORE THAN 5'-0" FROM EXIT.
FIRE ALARM AUDIBLE ONLY DEVICE		NOT LESS TH	HAN 90" TO TOP OR 6" BELOW CEILING, WHICH EVER IS
FIRE ALARM VISUAL ONLY DEVICE OF	A COMBINATION AUDIBLE AND		OM OF DEVICE OR NOT MORE THAN 96" TO TOP.
VISUAL DEVICE CARD READER		48" TO HIGHI	EST OPERABLE PART (SIDE OR FORWARD ACCESS).
INTERCOM STATION		54" TO HIGH	EST OPERABLE PART (SIDE ACCESS).
		48" HIGHEST	OPERABLE PART (FORWARD ACCESS).
SOUND SYSTEM VOLUME CONTROL		48" HIGHEST	OPERABLE PART (FORWARD ACCESS).
THERMOSTATS			EST OPERABLE PART (SIDE ACCESS). OPERABLE PART (FRONT ACCESS).
TEMPERATURE/HUMIDITY SENSORS		60" TO CENT	ER LINE OF BOX.
	WIRE/CONE	DUIT SIZING	GTABLE
	WIRE/CONE FOR 120V-20A BRANCH CIRCU		FED OTHERWISE)
IF DISTANCE (A+B) IN FEET IS: (SEE DIAGRAM AT RIGHT)	•	JITS ONLY (UNLESS NOT LIC CONDUIT, NTIRE CIRCUIT	TED OTHERWISE)
. ,	FOR 120V-20A BRANCH CIRCU USE COPPER WIRE IN METALL AWG SIZE AS FOLLOWS ON EI AND SIZE CONDUIT ACCORDIN	JITS ONLY (UNLESS NOT LIC CONDUIT, NTIRE CIRCUIT NGLY.	FT. FT.
· · · ·	FOR 120V-20A BRANCH CIRCU USE COPPER WIRE IN METALL AWG SIZE AS FOLLOWS ON EI AND SIZE CONDUIT ACCORDIN	JITS ONLY (UNLESS NOT LIC CONDUIT, NTIRE CIRCUIT NGLY. "A"	FT. FT. FT. FT. FT. FT. FT. FIRST ON CIRCUIT. FIRST ON CIRCUIT. FIRST ON CIRCUIT. FIRST ON CIRCUIT.
(SEE DIAGRAM AT RIGHT) 0' TO 100'	FOR 120V-20A BRANCH CIRCU USE COPPER WIRE IN METALL AWG SIZE AS FOLLOWS ON EI AND SIZE CONDUIT ACCORDIN WIRE SIZE C #12 AWG (MIN.)	JITS ONLY (UNLESS NOT LIC CONDUIT, NTIRE CIRCUIT NGLY. CONDUIT SIZE	FT. FT.
(SEE DIAGRAM AT RIGHT) 0' TO 100' 100' TO 175' 175' TO 300'	FOR 120V-20A BRANCH CIRCU USE COPPER WIRE IN METALL AWG SIZE AS FOLLOWS ON EI AND SIZE CONDUIT ACCORDIN WIRE SIZE CO #12 AWG (MIN.) #10 AWG #8 AWG	JITS ONLY (UNLESS NOT LIC CONDUIT, NTIRE CIRCUIT NGLY. 3/4" 3/4" 3/4" 1"	FT.   *FIRST ON   *FIRST ON   CIRCUIT.   "B" FT.   * RECEPTACLE OR LIGHTING LOAD
(SEE DIAGRAM AT RIGHT) 0' TO 100' 100' TO 175' 175' TO 300'	FOR 120V-20A BRANCH CIRCU USE COPPER WIRE IN METALL AWG SIZE AS FOLLOWS ON EI AND SIZE CONDUIT ACCORDIN WIRE SIZE CO #12 AWG (MIN.) #10 AWG #8 AWG #6 AWG (MAX.)	JITS ONLY (UNLESS NOT LIC CONDUIT, NTIRE CIRCUIT NGLY. 3/4" 3/4" 3/4" 1" TS ONLY (UNLESS NOTE IC CONDUIT, VTIRE CIRCUIT	FT.   *FIRST ON   *FIRST ON   CIRCUIT.   "B" FT.   * RECEPTACLE OR LIGHTING LOAD
(SEE DIAGRAM AT RIGHT) 0' TO 100' 100' TO 175' 175' TO 300' 300' TO 450' IF DISTANCE (A+B) IN FEET IS:	FOR 120V-20A BRANCH CIRCU USE COPPER WIRE IN METALL AWG SIZE AS FOLLOWS ON EI AND SIZE CONDUIT ACCORDIN WIRE SIZE CO #12 AWG (MIN.) #10 AWG #8 AWG #6 AWG (MAX.) FOR 277V-20A BRANCH CIRCUIT USE COPPER WIRE IN METALL AWG SIZE AS FOLLOWS ON EN AND SIZE CONDUIT ACCORDIN	JITS ONLY (UNLESS NOT LIC CONDUIT, NTIRE CIRCUIT NGLY. 3/4" 3/4" 3/4" 1" TS ONLY (UNLESS NOTE IC CONDUIT, NTIRE CIRCUIT NGLY.	FED OTHERWISE)         PANELBOARD         FT.         *FIRST ON         CIRCUIT.         CIRCUIT.         "B" FT.         * RECEPTACLE OR LIGHTING LOAD
(SEE DIAGRAM AT RIGHT) 0' TO 100' 100' TO 175' 175' TO 300' 300' TO 450'	FOR 120V-20A BRANCH CIRCU USE COPPER WIRE IN METALL AWG SIZE AS FOLLOWS ON EI AND SIZE CONDUIT ACCORDIN WIRE SIZE CO #12 AWG (MIN.) #10 AWG #8 AWG #6 AWG (MAX.) FOR 277V-20A BRANCH CIRCUIT	JITS ONLY (UNLESS NOT LIC CONDUIT, NTIRE CIRCUIT NGLY. 3/4" 3/4" 3/4" 1" TS ONLY (UNLESS NOTE	FED OTHERWISE)         FT.         FT.         *FIRST ON         *LAST ON         CIRCUIT.         CIRCUIT.         *B" FT.         * RECEPTACLE OR LIGHTING LOAD

CONSULTAN	

Revisions:

VA FORM 08 - 6231

**ISSUE FOR BID** 

03-18-22

Date:

1. SEE ALL PROJECT GENERAL NOTES AND OTHER REQUIREMENTS THE LIFE SAFETY AND INFECTION CONTROL REQUIREMENTS LOCATED WITHIN GENERAL DRAWINGS "G" SECTION. COMPLY WITH ALL REQUIREMENT AS THEY ARE A DIRECT PART OF THIS SECTION AND AS IF THEY WERE DIRECTLY INCLUDED AND PROVIDED BELOW.

#### BASIS OF DESIGN PROTOCOLS

DESIGN IS BASED ON LISTED MANUFACTURER MENTIONED ON ALL ELECTRICAL AND ALL SPECIAL SYSTEM DRAWINGS INCLUDING BUT NOT LIMITED TO VARIOUS ELECTRICAL EQUIPMENTS, DEVICES, LIGHT FIXTURES, LIGHTING CONTROLS, AND ALL SPECIAL SYSTEM DEVICES. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL EQUAL PRODUCTS SHALL MEETS OR EXCEEDS THE DESIGN INTENT, PERFORMANCE, OUTLINE DIMENSION, WEIGHT ETC. EQUAL PRODUCT SHOP SUBMITTALS SHALL BE REJECTED UNLESS CONTRACTOR PROVIDES WRITTEN STATEMENT INDICATING IT MATCHES 100% PERFORMANCE SPECS AND ALL ABOVE CRITERIA. EQUAL PRODUCT SHOP SUBMITTAL NOT MEETING ABOVE CRITERIA SHALL BE REVIEWED AND/OR SELECTED EQUAL PRODUCTS REQUIRES RE-DESIGN THAT WILL BE AT THE COST TO THE CONTRACTOR INCLUDING DELAY OF PROJECT DUE TO THIS PROCESS. ALTERNATIVELY EQUAL PRODUCTS ALONG WITH LETTER INDICATING CONTRACTOR IS RESPONSIBLE FOR MEETING DESIGN INTENT/CRITERA SHALL BE SUBMITTED AND APPROVED FROM VA/COR BEFORE BID AND VA/COR APPROVAL PROOF SHALL BE SUBMITTED ALONG WITH SHOP SUBMITTAL FOR REVIEW.

EQUIVALENCY SUBSTITUTIONS: THE "BASIS OF DESIGN (BOD) PROTOCOLS" ARE TO BE FOLLOWED FOR ALL EQUIPMENT, MATERIALS AND ASSEMBLIES SPECIFIED AND DETAILED THROUGHOUT ALL DRAWINGS AND SPECIFICATION SECTIONS, WHETHER THE BOD DESIGNATE IS SPECIFICALLY REFERENCED THEREIN OR NOT. SEE THE "G" GENERAL DRAWINGS SECTION FOR THE FULL BOD EQUIVALENCY SUBSTITUTION REQUIREMENTS AND PROTOCOLS TO BE FOLLOWED.

#### 3. CODES:

THE WORK SHALL COMPLY WITH ALL APPLICABLE, MUNICIPAL, STATE, NATIONAL CODES, AND ALL VA APPLICABLE DESIGN MANUALS STANDARDS REQUIREMENTS. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS THE CONSTRUCTION DOCUMENTS SHALL GOVERN. HOWEVER, THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.

ALL WORK, MATERIAL, AND EQUIPMENT SHALL COMPLY WITH ALL REQUIREMENTS OF THE LATEST EDITIONS AND INTERIM AMENDMENTS OF THE NATIONAL ELECTRICAL CODE (N.E.C.), NATIONAL ELECTRICAL SAFETY CODE, OSHA, AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES. ALL ELECTRICAL EQUIPMENT PROVIDED UNDER THIS CONTRACT SHALL BE NEW (EXCEPT WHERE OTHERWISE NOTED) AND SHALL SHALL BEAR THE MARK OF NATIONALLY RECOGNIZED TESTING LABORATORY, WHEN APPLICABLE. ALL EQUIPMENT OF THE SAME TYPE AND CAPACITY SHALL BE BY THE SAME MANUFACTURER.

#### 4. DRAWINGS AND SPECIFICATIONS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING AND COMPLYING WITH BOTH THE DRAWINGS AND SPECIFICATIONS. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN THE DRAWINGS, NOTES, SPECIFICATIONS, OR CODES, THE REFERENCE WHICH PROVIDES THE MORE COMPLETE OR HIGHER STANDARD SHALL PREVAIL UNLESS OTHERWISE CLARIFIED BY OWNER.

CONTRACTOR SHALL REVIEW ENTIRE SET OF CONTRACT DOCUMENTS: INCLUDING BUT NOT NECESSARILY LIMITED TO ALL ARCHITECTURAL, ALL STRUCTURAL, ALL MECHANICAL ALL ELECTRICAL, ALL PLUMBING, AND ENTIRE PROJECT MANUAL. CONTRACTOR SHALL ACKNOWLEDGE AND INCLUDE IN THE SCOPE OF WORK (CONTRACT) ALL CONDITIONS PERTINENT TO THE COMPLETION OF THE ELECTRICAL WORK. CONTRACTOR SHALL FULLY COORDINATE ELECTRICAL WORK WITH THE INSTALLATION OF WORK BY ALL OTHER TRADES AND MAKE NECESSARY FIELD ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE ELECTRICAL INSTALLATION. ALL OF THE ABOVE SHALL BE INCLUDED IN THE SCOPE OF WORK AT NO ADDITIONAL COST TO THE VA.

#### INTERPRETATION OF THE DOCUMENTS:

CAREFULLY COMPARE THE DRAWINGS AND SPECIFICATIONS, CHECKING MEASUREMENTS AND CONDITIONS UNDER WHICH THIS INSTALLATION IS TO BE MADE. FOR CLARIFICATION BETWEEN VARIOUS DRAWINGS, BETWEEN DRAWINGS OR SPECIFICATION, OR BETWEEN SECTIONS OF THE SPECIFICATION, THE MATTER SHALL BE REFERRED TO THE VA/COR FOR CLARIFICATION AND APPROVAL BEFORE ANY WORK IS EXECUTED. THE CONTRACTOR SHALL STATE IN THEIR PROPOSAL ANY EXCEPTIONS NECESSARY TO MAKE THIS A COMPLETE, READY TO USE INSTALLATION. IF NOT STATED IN THEIR BID, IT WILL NOT BE CONSIDERED EXTRA.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, IN A NEAT AND WORKABLE MANNER CONSISTENT WITH RECOGNIZED GOOD PRACTICE, AND SHALL BE SUBJECT TO THE APPROVAL OF THE VA/CO.

ANY CHANGES TO THE CONTRACT REQUIREMENTS MUST BE APPROVED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL KEEP UP-TO-DATE AS-BUILT DRAWINGS, ON-SITE, AVAILABLE FOR INSPECTION AT ANY TIME OF THE EXACT NATURE OF WORK, INCLUDING ALLOWABLE DEVIATIONS FROM THE CONTRACT DRAWINGS, FOR THE PURPOSE OF RECORD DOCUMENTS.

#### 6. ELECTRICAL DRAWINGS

THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND SHALL

NOT BE SCALED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL DOORS, WALLS, FURNITURE, EQUIPMENT, ETC.. THE LOCATION OF RACEWAY SYSTEM COMPONENTS IS SCHEMATIC. THE EXACT LOCATION OF RACEWAY SYSTEM COMPONENTS SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD. THE CONTRACTOR SHALL CONFIRM THE DIMENSIONS OF THE ACTUAL EQUIPMENT TO BE SUPPLIED FOR THIS PROJECT, VERIFY CLEARANCES AND ROUGH-INS, AND OBTAIN ALL APPROVALS PRIOR TO STARTING WORK.

#### SITE EXAMINATION

BEFORE SUBMITTING A BID, THE CONTRACTOR WILL VISIT THE SITE, EXAMINE THE PREMISES, AND MAKE A THOROUGH SURVEY OF THE EXISTING CONDITIONS. THIS VISIT SHALL ONLY BE ALLOWED AS PER THE VA SCHEDULED WALK THROUGH. THE SUBMISSION OF A BID WILL BE CONSTRUED AS EVIDENCE THAT SUCH A VISIT HAS BEEN MADE. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE OR FOR LATER CLAIMS FOR LABOR, EQUIPMENT, MATERIALS REQUIRED, OR FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH VISIT BEEN MADE.

CONTRACTOR SHALL CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATIONS, VISIT THE SITE OF THE WORK, AND FULLY INFORM THEM SELF AS TO ALL CONDITIONS AND MATTERS THAT CAN, IN ANY WAY, AFFECT THE WORK OR THE COST THEREOF. SHOULD THIS CONTRACTOR FIND DISCREPANCIES IN, OR OMISSIONS FROM, THE DRAWINGS, SPECIFICATIONS OR OTHER DOCUMENTS OR BE IN DOUBT AS TO THEIR MEANING, NOTIFY THE VA/COR AT ONCE, IN WRITING, OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND NEW WORK, OR BETWEEN ELECTRICAL WORK AND THE WORK OF OTHER TRADES. OBTAIN CLARIFICATION(S) PRIOR TO SUBMITTING ANY BID. LACK OF SUCH NOTIFICATION SHALL BE CONSTRUED TO INDICATE NO DISCREPANCIES OR CONFLICTS EXIST. ADDITIONAL COMPENSATION WILL NOT BE GRANTED AFTER AWARD OF CONTRACT FOR ANY WORK REQUIRED TO COMPLY WITH THESE REQUIREMENTS.

#### COORDINATION WITH OTHER TRADES:

THE ELECTRICAL CONTRACTOR SHALL OBTAIN A COMPLETE SET OF GENERAL, ARCHITECTURAL AND ENGINEERING DOCUMENTS AND COORDINATE WITH MECHANICAL, PLUMBING, ARCHITECTURAL, AND OTHER TRADES FOR EXACT DIMENSIONS, CLEARANCES, ROUGH-IN LOCATIONS AND OTHER ADDITIONAL SCOPES OF WORK THAT MAY NOT BE SHOWN ON THE ELECTRICAL PLANS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL 120 VOLT (AND HIGHER) AC POWER TO OTHER TRADES EQUIPMENT AND HARDWARE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONTROLS, FIRE AND SECURITY SYSTEMS, MOTORIZED DOORS, DAMPERS, LIFTS, AND OTHER SYSTEMS. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE ELECTRICAL PLANS, THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL SAFETY DISCONNECT SWITCHES TO MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED ..

THE CONTRACTOR SHALL CHECK ALL ARCHITECTURAL STRUCTURAL, AND MECHANICAL TRADES WORK FOR POSSIBLE INTERFERENCE CAUSED BY CONDITIONS IN THE FIELD, BEFORE THE BID IS MADE. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE TO THE CONTRACTOR BY REASON OF HIS FAILURE TO HAVE MADE SUCH EXAMINATIONS OR OF ANY ERROR OF THEIR PART.

THE ELECTRICAL CONTRACTOR IS: RESPONSIBLE FOR SCHEDULING DELIVERY, RECEIVING, UNLOADING, UNCRATING, STORING SETTING IN PLACE, AND PROTECTING FROM DAMAGE, VANDALISM, THEFT OR WEATHER DURING CONSTRUCTION FOR ALL NEW EQUIPMENT FURNISHED BY THE ELECTRICAL CONTRACTOR.

CONTRACTOR SHALL PAY ALL PERMIT FEES, PLAN REVIEW FEES, LICENSE FEES, INSPECTIONS AND TAXES APPLICABLE TO THIS DIVISION IF NECESSARY. (FEDERAL GOVERNMENT IS NOT SUBJECT TO LOCAL PERMITS OR FEE FOR THE PROJECT).

#### FIRE STOPPING: 10.

ALL PENETRATIONS IN WALL, FLOOR OR CEILINGS SHALL BE SUITABLY CLOSED UP AND SEALED WITH AN INTUMESCENT FIRE STOPPING COMPOUND LISTED IN THE MOST RECENT FACTORY MUTUAL RESEARCH CORPORATION (FMRC) APPROVAL GUIDE. WHEN NEW CABLES/CONDUITS PENETRATE EXISTING FIRE RATED WALL, PENETRATIONS SHALL BE SEALED TO MATCH EXISTING RATING TO ENSURE IT RETAIN EXISTING CONDITIONS. THE BOD FOR FIRE STOPPING PRODUCTS SHALL BE AS MANUFACTURED BY THE 3M CO.

#### 11. PAINTING:

ALL NEWLY INSTALLED EXPOSED PIPING SHALL BE PAINTED TO MATCH THE ADJACENT WALL OR CEILING SURFACE UNLESS THE REQUIRED COLOR CODING IS SPECIFIED.

#### 12. VA FURNISHED EQUIPMENT:

EQUIPMENT THAT WILL BE FURNISHED BY THE VA WILL BE INDICATED ON A SCHEDULE OR BE INCLUDED IN SPECIFIC NOTES OR SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE WITH THE VA/COR FOR DELIVERY SCHEDULES. THE CONTRACTOR IS TO ASSUME THAT ON SITE STORAGE MAY NOT BE AVAILABLE WHEN COORDINATING DELIVERY OF EQUIPMENT. THE CONTRACTOR, IN COORDINATION WITH THE VA/COR. WILL INSPECT THE DELIVERY FOR ACCURACY AND SHIPMENT DAMAGE AND ACCEPTING THE EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO STORE, PROTECT, AND ULTIMATELY INSTALL THE EQUIPMENT.

13. ELECTRICAL SERVICE DISRUPTIONS: WORK ON ENERGIZED EQUIPMENT SHALL BE COORDINATED

WITH THE VA COR. ENERGIZED WORK PERMITS ARE AVAILABLE, BUT ONLY GRANTED AS A LAST RESORT. ALL EFFORT SHALL BE MADE TO NOT WORK ON ENERGIZED EQUIPMENT. THIS RESTRICTION INCLUDES REMOVING THE COVER FROM ANY PANEL BOARD, SWITCHBOARD, M.C.C ETC., ALL WORK WHICH EXPOSES ACTIVE BUS REQUIRES A WRITTEN NOTIFICATION TO THE VA/COR WHICH WILL OUTLINE THE METHOD OF PROCEDURE FOR THE WORK. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 6 WEEKS NOTICE TO THE VA/COR BEFORE WORKING ON ANY ENERGIZED ELECTRICAL SYSTEM. ALL POWER DISRUPTION SHALL OCCUR AT TIMES AND OF DURATIONS ACCEPTABLE TO THE VA/COR.

#### 14. EQUIPMENT:

ALL MATERIALS AND EQUIPMENT USED IN THIS INSTALLATION SHALL BE NEW, AND HAVE THE APPROPRIATE UL LISTING AND LABEL.

THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, TOOLS, EQUIPMENT SERVICES, AND ACCESSORIES FOR COMPLETE INSTALLATION OF ALL ELECTRICAL WORK AS NOTED. ITEMS OMITTED FROM EITHER THE SPECIFICATIONS OR THE DRAWINGS, BUT SHOWN OR DESCRIBED IN ONE OR THE OTHER, AND ITEMS NECESSARY TO MAKE THE ELECTRICAL SYSTEM COMPLETE AND WORKABLE SHALL FORM A PART OF THE WORK.

#### 15. MISCELLANEOUS SUPPORTING MEMBERS:

ALL ANGLES CHANNELS, AND OTHER MISCELLANEOUS STEEL BOLTS, RODS, ETC.. REQUIRED TO SUPPORT LIGHT FIXTURE, CONDUIT, RACEWAY, LADDER TRAY, OR OTHER ELECTRICAL EQUIPMENT OR DEVICES SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ANY MENTION OF A SPECIFIC VOLTAGE ON THE ELECTRICAL DRAWINGS SHALL NOT RELIEVE THE ELECTRICAL CONTRACTOR OF THE RESPONSIBILITY TO VERIFY THE VOLTAGE PRIOR TO PURCHASING OR ROUGH-IN WORK.

16. DISTRIBUTION PANELS AND PANELS BOARDS:

ALL DISTRIBUTION PANELS AND PANEL BOARDS SHALL BE PROVIDED WITH TYPEWRITTEN DIRECTORIES. SEE PANEL SCHEDULES ON THE DRAWINGS AND SPECIFICATION FOR COMPLETE IDENTIFICATION AND LABELING REQUIREMENTS. ALL DISTRIBUTION PANELS AND PANEL BOARDS SHALL BE LABELED ON THE PANEL CABINET WITH THE PANEL NAME AND THE POWER SOURCE FEEDING THE PANEL AS PER THE ELECTRICAL ONE LINE. ALL PANELS AND PANEL BOARDS SHALL BE PROVIDED WITH HINGED DOOR WITH LOCK AND KEY.

17. SAFETY:

TONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF THE VA'S EMPLOYEES, BUILDING EMPLOYEES AND GUESTS, AS WELL AS THEIR OWN FORCES, BY ADEQUATELY PROVIDING APPROPRIATE PPE AND PROTECTING ANY EXPOSED LIVE CONDUCTORS, OR DEVICES THROUGHOUT THE COURSE OF THIS WORK.

EQUIPMENT CONNECTIONS:

PROVIDE FINAL CONNECTIONS FOR ALL EQUIPMENT FURNISHED UNDER OTHER DIVISIONS AND FOR ALL VA FURNISHED EQUIPMENT. PROVIDE A FLEXIBLE LIQUID TIGHT CONNECTION TO ALL VIBRATION PRODUCING EQUIPMENT.

19. TEMPORARY LIGHTING, POWER, FIRE, AND SAFETY:

PROVIDE TEMPORARY LIGHTING AND POWER AS REQUIRED IN AREAS UNDERGOING WORK DURING CONSTRUCTION. FURNISH AND INSTALL ONE OSHA APPROVED PIGTAIL SOCKET WITH 150-WATT LAMP FOR EVERY 500 SQUARE FEET OF FLOOR SPACE AND A MINIMUM 1 PER ROOM. THE TEMPORARY LIGHTING SHALL BE LEFT IN PLACE UNTIL PERMANENT LIGHTING IS COMPLETELY OPERATIONAL.

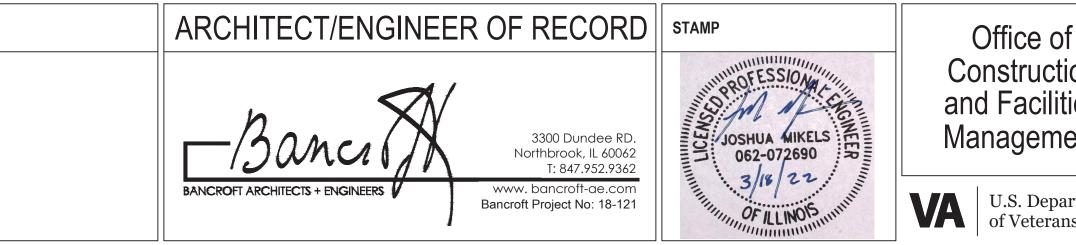
FURNISH AND INSTALL POWER OUTLETS TO A TOTAL OF ONE FOR EVERY 2000 SQUARE FEET OR PART THEREOF OF FLOOR AREA. THESE SHALL BE 20 AMP, SINGLE PHASE RECEPTACLES FOR EITHER 110 OR 220 VOLTS AS DIRECTED BY THE GENERAL/PRIME CONTRACTOR. COORDINATE FOR ADDITIONAL TEMPORARY POWER REQUIREMENTS WITH OTHER TRADES AND PROVIDE AN ADEQUATE INSTALLATION.

COMPLY WITH NFPA 241 FOR SAFEGUARDING DURING CONSTRUCTION AND ALTERATION OPERATIONS. IN ADDITION, ANY OPENINGS IN FIRE RATED SEPARATIONS BETWEEN OCCUPIED AND UNOCCUPIED (OR OPERATIONAL AND NON-OPERATIONAL) AREAS SHALL BE SEALED AT THE END OF EACH WORK DAY WITH AN APPROPRIATE FIRE RATED ENCLOSURE OR SEALANT. DO NOT COMPROMISE EXISTING SECURITY OR FIRE ALARM SYSTEMS SERVING THE OCCUPIED OR OPERATIONAL AREAS.

DURING CONSTRUCTION THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN ELECTRICAL UTILITIES OF THE BUILDING WITHOUT INTERRUPTION. SHOULD IT BE NECESSARY TO INTERRUPT ANY ELECTRICAL SERVICE OR UTILITY, THE CONTRACTOR SHALL SECURE PERMISSION IN WRITING FROM THE VA/COR FOR SUCH INTERRUPTION AT LEAST 6 WEEKS IN ADVANCE. ANY INTERRUPTION SHALL BE MADE WITH THE MINIMUM AMOUNT OF INCONVENIENCE TO THE VA AND ANY SHUT-DOWN TIME SHALL HAVE TO BE ON A PREMIUM TIME/AFTER HOURS BASIS AND SUCH TIME TO BE INCLUDED IN THE CONTRACTOR'S BID.

CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY LIGHTING AND POWER FOR ALL TRADES DURING CONSTRUCTION AND REMOVE IT AT COMPLETION OF WORK.

CONTRACTOR SHALL ESTABLISH SAFE WORKING PROCEDURES FOR THE PROTECTION OF THE WORKMEN IN ALL PHASES OF WORK, COMPLYING WITH THE APPLICABLE



## ELECTRICAL GENERAL NOTES

PROVISIONS OF ALL CITY, STATE, AND FEDERAL SAFETY LAWS (OSHA), AND AS RECOMMENDED IN THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" AS ISSUED BY THE ASSOCIATION OF GENERAL CONTRACTORS OF AMERICA, INC., 20TH AND E. STREETS, N.W. WASHINGTON, D.C.

#### 20. POWER COORDINATION:

THE CONTRACTOR SHALL PERFORM ALL COORDINATION AND SCHEDULING OF LOCAL POWER OUTAGES REQUIRED WITH THE VA/COR. ALL NEEDED POWER OUTAGES TO BE SCHEDULED WITH THE VA/COR SIX WEEKS IN ADVANCE

#### 21. CABLING:

BRANCH CIRCUITS TO RECEPTACLES, LIGHTING AND MISC. SMALL LOADS (20 AMP CIRCUITS), UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE 2 - #12, 1 - #12 GRD., 3/4" C. A SEPARATE NEUTRAL SHALL BE RUN FOR EACH CIRCUIT. SEE WIRE SIZING TABLE ON THIS SHEET.

ALL WIRE SIZE #12 AWG AND LARGER SHALL BE STRANDED AND SOLID FOR #14 AND SMALLER.

EACH BRANCH CIRCUIT HOMERUN SHALL HAVE NO MORE THAN THREE CIRCUITS. EACH BRANCH CIRCUIT HOMERUN SHALL HAVE A SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR, ALL CONDUCTORS SHALL BE COPPER TYPE THWN / XHHW.

CABLE JACKET COLOR FOR VARIOUS SYSTEM SHALL BE AS FOLLOW:

VOICE (VOiP) - BLUE 3 DATA - BLUE CLINICAL WIRELESS (OIT) - BLUE VIDEO SURVEILLANCE - BLUE NURSE CALL - GREEN FIRE ALARM - RED ANALOGUE LINE - WHITE

## 22. CABLING SIZES:

UPS - ORANGE

BRANCH CIRCUIT CABLE SIZING SHALL BE ADJUSTED BASED ON THE VALUES INDICATED IN THE WIRE SIZING TABLE PER THIS SHEET.

#### 23. SPECIAL LUG REQUIREMENTS:

ANY CABLE WHICH TERMINATES DIRECTLY ON TO A BUS BAR SHALL BE 2 BOLT LONG BARREL TYPE WITH INSPECTION HOLES PRODUCED WITH NON FLASHING TYPE DYES WITH THE BOD AS MANUFACTURED BY THOMAS AND BETTS, OR EQUIVALENT MINIMUM 10 TONS OF COMPRESSION, HEX CRIMP. THE USE OF HEAT SHRINK TUBING IS EXPLICITLY FORBIDDEN.

#### 24. RACEWAYS:

ALL WIRE SHALL BE INSTALLED IN THIN WALL (E.M.T.) CONDUIT UNLESS OTHERWISE NOTED. MINIMUM SIZE SHALL BE 3/4". ALL THINWALL FITTINGS SHALL BE OF THE STEEL COMPRESSION GLAND TYPE.

ALL UNDERFLOOR, UNDERGROUND OR

EXPOSED-TO-WEATHER CONDUIT SHALL BE HEAVYWALL GALVANIZED RIGID STEEL. (G.R.S.), MINIMUM 3/4". ALL BURIED CONDUITS AND 2" AND ABOVE EXPOSED-TO-WEATHER CONDUIT SHALL BE PVC COATED HEAVYWALL GALVANIZED RIGID STEEL (G.R.S).

ALL CONDUIT FASTENERS, STRAPS, SUPPORTS ETC. MUST BE "BOLT-ON" GALVANIZED STEEL ON EXPOSED CONSTRUCTION AND IN WET AREAS. SNAP-ON BLACK METAL "CADDY" CLIPS IN METAL PARTITION WALLS AND ABOVE SUSPENDED CEILINGS WILL BE PERMITTED. ALL FASTENERS, STRAPS, CLIPS, ETC. SHALL BE UL LISTED FOR THEIR USE.

SUPPORT CONDUIT WITH P1000 UNISTRUT AND 3/8" THREADED ROD 8'-0" O.C. MAX.

PROVIDE MYERS HUBS FOR ALL CONDUIT TO ENCLOSURE CONNECTIONS.

CABLE TRAYS ARE NOT ALLOWED. ALL CONDUIT RACEWAYS SHALL BE CONCEALED IN OR WITHIN: WALLS, CEILING CAVITY, ROOF CONSTRUCTION (WHERE APPROVED), SLAB, GRADE, ETC. UNLESS OTHERWISE NOTED. ANY RACEWAY THAT IS TO BE ROUTED EXPOSED SHALL BE APPROVED BY THE VA/COR AND SUCCESSFULLY REVIEWED BY THE ARCHITECT/ENGR. PRIOR TO INSTALLATION. ALL CONDUIT SHALL BE ROUTED PARALLEL OR PERPENDICULAR TO WALLS AND STRUCTURAL MEMBERS WITH 90° BENDS WHERE REQUIRED AND SHALL BE RACKED. PULL AND JUNCTION BOXES SHALL BE HELD TO A MINIMUM. CONTRACTOR SHALL INSTALL ALL WORK IN NEAT & INDUSTRY RECOGNIZED MANNER OF BEST PRACTICES.

GROUND ALL CONDUITS, MOTORS, AND EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ALL PROVISIONS WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. VA SPECIFICATION SECTION 26 05 26 "GROUNDING AND BONDING ELECTRICAL SYSTEM".

CONTRACTOR SHALL PROVIDE PULL BOXES, JUNCTION BOXES. SPLICE BOXES AND FITTINGS WHERE NECESSARY OR REQUIRED BY THE NEC.

CONDUIT ROUTING SHOWN DIAGRAMMATIC AND BASED ON CONDITIONS AT THE TIME THE FIELD SURVEY. CONTRACTOR SHALL FIELD VERIFY EXACT ROUTING AS FIELD CONDITION DICTATES AT THE TIME OF CONSTRUCTION. PROVIDE PULL BOXES SIZED AS PER NFPA-70 LATEST EDITION. THERE SHALL NOT BE MORE THAN EQUIVALENT OF THREE QUARTER BENDS (270° TOTAL) BETWEEN PULL POINTS.

ALL ELECTRICAL CONDUITS TO A MINIMUM OF 3/4". MULTI-GANG BACKBOXES FOR DIFFERENT VOLTAGES AND TYPES OF EMERGENCY AND NORMAL BRANCH WIRING

DEVICES SHALL HAVE DIVIDERS BETWEEN DEVICES.

PROVIDE JUNCTION BOX AND CONDUIT COLOR FOR VARIOUS SYSTEMS AS PER FOLLOWING COLOR SCHEME

POWER:	
120/208 VOLT (NORMAL POWER):	SILVER
120/208 VOLT (LIFE SAFETY/CRITICAL):	SILVER
277/480 VOLT (NORMAL & EMERGENCY):	SILVER
LIGHTING	WHITE
GENERAL DATA/VOICE:	SILVER
FIRE ALARM:	RED
NURSE CALL/GET WELL NETWORK:	SILVER
T-STAT:	BLUE
SECURITY (CARD READER/VIDEO:	SILVER
FIBER OPTIC SOURCE A:	BLACK

WWHERE CORE DRILLING AND CUTTING OF FLOORS OR WALLS IS REQUIRED, X-RAY THE AREAS PRIOR TO DRILLING. AVOID INTERFERENCE WITH EXISTING CONCEALED ELECTRICAL, PLUMBING INSTALLATIONS, AND REINFORCING STEEL. REFINISH DAMAGED AND CUT SURFACES TO MATCH ADJACENT FINISHES.

CONTRACTOR SHALL FIREPROOF ALL CONDUIT OPENINGS BETWEEN FLOORS AND ANY INTERSPACE FIRE SEPARATION BLOCK WALLS WITH A VA/COR APPROVED U.L. LISTED FIRE RETARDANT MATERIAL, AS SUCCESSFULLY REVIEWED BY THE ARCHITECT/ENGINEER..

#### 25. LIGHTING:

ALL FINAL LOCATIONS AND ARRANGEMENTS OF LIGHTING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL REFLECTED CEILING PLAN. COORDINATE LIGHT LOCATION WITH CABLE TRAY AND CEILING MOUNTED MECHANICAL EQUIPMENTS AND ENSURE THAT SERVICE CLEARANCE AND ACCESS IS NOT RESTRICTED

26. RECEPTACLES

CONTRACTOR SHALL VERIFY ALL OUTLET MOUNTING ARRANGEMENTS, HEIGHTS AND LOCATIONS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN. ANY MENTION OF A SPECIFIC MOUNTING ARRANGEMENT, HEIGHT OR LOCATION SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO VERIFY THE SPECIFIC REQUIREMENT WITH THE EQUIPMENT FURNISHED OR THE OTHER TRADES WORKING IN THE SAME AREA. NO ADDITIONS TO THE CONTRACT SUM WILL BE PERMITTED FOR OUTLETS IN WRONG LOCATIONS, IN CONFLICT WITH OTHER WORK ETC. THE VA RESERVES THE RIGHT TO RELOCATE ANY DEVICE UPTO 10'-0" PRIOR TO ROUGH-IN WITHOUT ANY ADDITIONAL CHARGES BY THE CONTRACTOR.

OUTLET BOXES MOUNTED BACK-TO-BACK IN THE SAME WALL ARE PROHIBITED. A MINIMUM 24" CENTER-TO-CENTER LATERAL SPACING SHALL BE MAINTAINED BETWEEN BOXES. ALL THE EMERGENCY POWER OUTLETS SHALL BE HOSPITAL GRADE RED IN COLOR. NORMAL POWER IS IVORY, UPS POWER IS ORANGE. FACE PLATES ARE STAINLESS STEEL. OUTLETS POWERED FROM EMERGENCY GENERATOR SHALL ALSO LIST : LS, CR OR EQ.

27. AS BUILT/RECORD DOCUMENTS:

ELECTRICAL CONTRACTOR SHALL FURNISH CONTRACT AS-BUILT RECORD DOCUMENTS TO THE VA/COR AND ARCHITECT/ENGINEER BEFORE FINAL PAYMENT WILL BE ISSUED. THE CONTRACT RECORD DOCUMENTS SHALL DIAGRAMMATICALLY INDICATE THE ACTUAL INSTALLED CONDITIONS THAT DEVIATE FROM ORIGINAL DESIGN DRAWINGS.

28. GUARANTEE:

ALL EQUIPMENT FURNISHED AND WORK PERFORMED UNDER THE CONTRACT DOCUMENTS SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP FOR A PERIOD AS PER VA SPECIFICATION, UNLESS OTHERWISE NOTED. ANY FAILURE OF EQUIPMENT OR WORK DUE TO DEFECTS IN MATERIALS OR WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR AT NO COST TO THE VA.

29. FINAL INSPECTION:

ALL THE ITEMS AND WORK SHALL BE TESTED FOR SAFE AND PROPER OPERATIONS.

UPON COMPLETION OF THE WORK, THE ELECTRICAL CONTRACTOR SHALL REVIEW AND CHECK THE ENTIRE PORTION OF WORK, CLEAN EQUIPMENT AND DEVICES, REMOVE SURPLUS MATERIALS AND RUBBISH FROM THE OWNER'S PROPERTY, LEAVING THE WORK IN NEAT AND CLEAN ORDER AND IN COMPLETE WORKING CONDITION. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ANY CARTON, DEBRIS, ETC. FOR EQUIPMENT INSTALLED BY THIS CONTRACTOR INCLUDING EQUIPMENT FURNISHED BY THE OWNER. THE ABOVE SHALL ALSO APPLY TO ALL EQUIPMENT FURNISHED BY OTHERS AND UNPACKED OR REMOVED FROM CARTON, BY THE CONTRACTOR.

_	ELECT	DEMOLITIC
1.	EXAMINATION	

CONTRACTOR SHALL SURVEY THE EXISTING SITE AND EXAMINE AREAS UNDER WHICH THE WORK IS TO BE PERFORMED PRIOR TO BIDDING AND DETERMINE THE EXTENT OF NECESSARY RELOCATIONS, REMOVALS AND REPAIRS TO THE EXISTING ELECTRICAL WORK REQUIRE AVOIDING CONFLICTS WITH NEW CONSTRUCTION IN ORDER TO MEET MINIMUM CODE REQUIREMENTS. NOTIFY THE VA/COR IN WRITING OF ANY CONDITIONS DETRIMENTAL TO THE PROPER AND TIMELY COMPLETION OF THE WORK. CONTRACTOR SHALL NOT PROCEED WITH WORK UNTIL SATISFACTORY CONDITIONS HAVE BEEN CORRECTED. A FIELD SURVEY VERIFICATION IS RECOMMENDED IN ORDER TO SUBMIT AN ELECTRICAL BID, FAILURE TO DO SO SHALL NOT RELIEVE THIS CONTRACTOR FROM PERFORMING THE WORK OF THIS CONTRACT.

DEMOLITION DRAWINGS ARE BASED ON FIELD OBSERVATION AND EXISTING RECORD DRAWINGS. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS ASSOCIATED WITH RELOCATION AND REMOVAL OF ELECTRICAL WORK AS DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN ISSUES WHEN CONCEALED WORK HAS BEEN EXPOSED. NO ADDITIONAL CLAIMS FOR WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, UNLESS, IN CERTAIN CASES, CONSIDERED JUSTIFIABLE BY THE COR.

REVIEW MECHANICAL AND ARCHITECTURAL DEMOLITION DRAWINGS FOR ANY OTHER ELECTRICAL DEMOLITION REQUIREMENTS

#### 2. PREPARATION

ALL EXISTING EQUIPMENT IS TO REMAIN OPERATIONAL DURING THE CONSTRUCTION PERIOD. ANY TEMPORARY WIRING OR REROUTING OF CIRCUITRY TO ACHIEVE THIS IS BY THE ELECTRICAL CONTRACTOR. SHUTDOWN OF EXISTING SERVICES SHALL ONLY BE PERMITTED UPON WRITTEN APPROVAL FROM THE OWNER AND THEN ONLY FOR THE DATE AND DURATION AGREED UPON. INCLUDE ALL PREMIUM TIME CHARGES IN THE BASE BID.

ANY UTILITY SHUT DOWN THAT AFFECT PATIENT CARE SHALL BE COORDINATED A MINIMUM OF 45 DAYS IN ADVANCE AND SHALL BE PERFORMED OFF HOUR PERIODS OR WEEKENDS AT THE CONVENIENCE OF VA AS APPROVED THE BY VA

IT IS MANDATORY THAT ALL THE EXISTING FIRE ALARM AND COMPONENTS TO REMAIN FUNCTIONAL DURING CONSTRUCTION.

BEFORE WORKING ON ANY EQUIPMENT THAT IS CONNECTED TO SOURCE OF ENERGY, CONTRACTOR SHALL PROVIDE OSHA MANDATED LOCK-OUT/TAG-OUT AT SOURCE LOCATION TO SHUT OFF ENERGY SOURCE.

DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK.

WHERE SOURCE OF SUPPLY IS A PANEL BOARD, RE-LABEL PROTECTIVE DEVICE AS "SPARE" AND SET TO THE OFF POSITION AFTER DEMOLITION IS COMPLETE. PROVIDE REVISED CIRCUIT DIRECTORIES IN ALL PANEL BOARDS AFFECTED BY NEW OR DEMOLITION WORK THAT INDICATES ALL LOADS, NEW AND MODIFIED.

CIRCUIT NUMBER LABEL SHOWN ON EXISTING OUTLETS AND SWITCHES IS AS PER FIELD SURVEY. CONTRACTOR SHALL BE RESPONSIBLE TO TRACE CIRCUITS AND FIND OUT BREAKER LOCATIONS AND DEMO THE CABLES AND UPDATE THE PANEL DIRECTORY FOR VA RECORD.

WHERE CORE DRILLING AND CUTTING OF FLOORS/SLABS OR WALLS IS REQUIRED CONTRACTOR IS TO EXERCISE EXTREME CAUTION AND X-RAY THE AREAS PRIOR TO DRILLING/CUTTING SLAB TO AVOID DAMAGE TO ANY EXISTING CONCEALED ELECTRICAL, PLUMBING INSTALLATIONS, AND REINFORCING STEEL ETC. THAT MAY BE CONCEALED IN OR BENEATH THE SLAB/WALL. CONTRACTOR SHALL FIREPROOF ALL THE OPENING WITH U.L. LISTED FIRE RETARDANT MATERIAL, TO MATCH EXISTING CONDITIONS.

MAKE EVERY EFFORT POSSIBLE TO REMOVE ANYTHING ABANDONED. LEAVE IN PLACE AS AN ABSOLUTE LAST RESORT. REMOVE EXPOSED ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING AND FINISHED WALL. CUT CONDUIT FLUSH WITH WALLS AND FLOORS, AND PATCH THE SURFACE TO MATCH EXISTING. CONDUIT MAY BE ABANDONED IN WALLS AND FLOORS TO REMAIN BUT EXISTING WIRING WITHIN THESE CONDUITS TO BE REMOVED COMPLETELY.

REPAIR ADJACENT CONSTRUCTION AND FINISHES DAMAGED DURING DEMOLITION AND EXTENSION OF WORK.

#### DISPOSAL

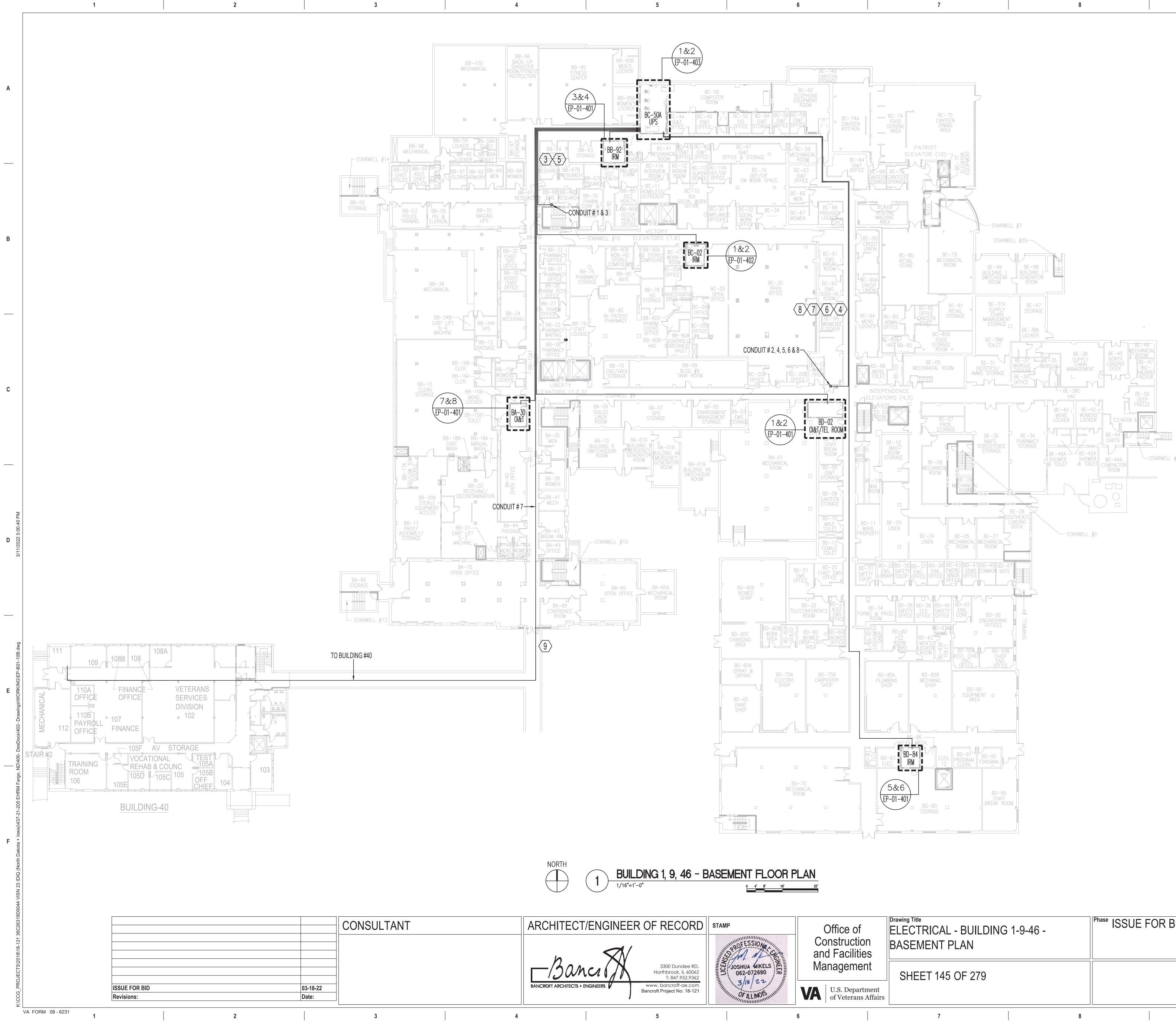
OWNER SHALL HAVE RIGHT TO RETAIN ANY EQUIPMENT OR MATERIALS THAT HAVE BEEN DEMOLISHED PRIOR TO DISPOSAL OR REMOVAL FROM SITE. ANY EQUIPMENT OR MATERIALS NOT WANTED BY THE OWNER SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM SITE.

CONTRACTOR SHALL COMPLY WITH ENVIRONMENTAL LAWS AND REGULATIONS FOR DISPOSAL OF DEMOLISHED MATERIALS AND EQUIPMENT.

	Drawing Title ELECTRICAL - GENERAL NOTES		OR BID	Project Title EHRM INFRASTRUCTURE UPGRADES			Project Number 437-21-205 Building Number			
ent artment ns Affairs	SHEET 143 OF 279				Location FARGO VA HEALTH CARE SYSTEM Issue Date 3/18/2022 WG BX		Drawing Number E001			
	7		8			9			10	

## ON NOTES

ELECTRICAL SYMBOLS - DIAGRAM	ELECTRICAL SYMBOL - POWER PLAN	ELECTRICAL SYMBOLS - LIGHTING PLAN	FIRE ALARM SYMBOLS		ELECTRICAL ABBREVIATION	
	MOTOR, SINGLE-PHASE	\$2 SWITCH	FSD STANDARD, CEILING MOUNTED SMOKE DETECTOR	1PH SINGLE-PHASE	EC EMPTY CONDUIT	NEUT OR N NEUTRAL
GROUND GROUND	MOTOR, THREE-PHASE	BLANK = SINGLE POLE 3 = THREE-WAY 4 = FOUR-WAY K = KEY OPERATED	<b>F</b> SSD SOUNDER BASE, CEILING MOUNTED SMOKE DETECTOR	1PSINGLE POLE2/CTWO-CONDUCTOR	EG EQUIPMENT GROUND EL ELEVATION	NFPA NATIONAL FIRE PROTECTION ASSOCIAT NIC NOT IN CONTRACT
	T TRANSFORMER, PLAN	DM= DIMMERP = WITH PILOT LIGHTLV= LOW VOLTAGETM = TIMER OPERATED	(F)HDRATE-OF-RISE STD, CEILING MOUNTED HEAT DETECTOR135 (F)HDFIXED TEMP (135°), CEILING MOUNTED HEAT DETECTOR	3/C THREE-CONDUCTOR 3PH THREE-PHASE	ELEC ELECTRIC OR ELECTRICAL ELEV ELEVATOR	NL NIGHT LIGHT NO NORMALLY OPEN
WYE CONNECTION SURGE AND LIGHTNING ARRESTER	WYE CONNECTION	WP=WEATHER PROOFX = EXPLOSION PROOFT= THERMAL OVERLOAD PROTECTIONOS= OCCUPANCY SENSOR	DUCT SMOKE DETECTOR W/REMOTE TEST STATION	4/C FOUR-CONDUCTOR 4W FOUR-WIRE	EMCP EMERGENCY MONITORING CONTROL EMER EMERGENCY	
	EARTH GROUND	SWITCH, OCCUPANCY SENSOR REFER TO FIXTURE SCHEDULE FOR TYPE	WP INDICATES WEATHERPROOF HOUSING FOR BOTH	A/C UNIT AIR CONDITIONING UNIT	EMI ELECTROMAGNETIC INTERFERENCE EMT ELECTRICAL METALLIC TUBING	
STRESS CONE		DOUBLE FACED CEILING OR WALL MOUNTED EXIT SIGN. ARROW INDICATES DIRECTION	PMANUAL PULL STATION WP-WEATHERPROOF HOUSING(F)HSCEILING MOUNTED HORN/STROBE (A/V)	A/E ARCHITECT/ENGINEER	ENCL ENCLOSURE	OD OUTSIDE DIAMETER
TRANSFORMER	J POWER JUNCTION BOX		(F)ST CEILING MOUNTED STROBE	AAP ALARM ANNUNCIATOR PANEL AC ALTERNATING CURRENT OR ARMORED CABLE	EPOEMERGENCY POWER OFFEPRFEXPLOSION PROOF	OL OVERLOAD
	(A/V) DOUBLE GANG DEEP AUDIO/VISUAL JUNCTION BOX	SINGLE FACED CEILING OR WALL MOUNTED EXIT SIGN. ARROW INDICATES DIRECTION	<b>F</b> SP CEILING MOUNTED FIRE ALARM SPEAKER	ACC ACCESSIBLE ADDL ADDITIONAL	ESMT EASEMENT EWC ELECTRIC WATER COOLER	P POLE PA PUBLIC ADDRESS
CONTACTOR	C C LADDER CABLE TRAY	LIGHTING WALL PACK - EXTERIOR BUILDING	FSPS CEILING MOUNTED FIRE ALARM SPEAKER/STROBE	ADJ ADJACENT, ADJOINING ADO AUTOMATIC DOOR OPENER	EWH ELECTRIC WATER HEATER EXIST, EX EXISTING	PB PANELBOARD, PULL BOX, OR PUSHBUT PBPU PREFABRICATED BEDSIDE PATIENT UNI
EARTH GROUND	HOMERUN TO PANELBOARDS. 4#10 + 1#12 GROUND IN 3/4" CONDUIT	〕 LIGHTING LANDSCAPE WALL	F       HS       WALL MOUNTED HORN/STROBE         F       ST       WALL MOUNTED STROBE	AF AMPERE FRAME OR AMP FUSE AFC ABOVE FINISHED COUNTER, AUTOMATIC FREQUENC	CY FA FIRE ALARM	PCB POLYCHLORINATED BIPHENYL PEC PHOTOELECTRIC CELL
PB PULL BOX	PB PULL BOX	LIGHT FIXTURE, DIRECTIONAL	F     SP     WALL MOUNTED FIRE ALARM SPEAKER	AFF ABOVE FINISHED FLOOR	FAAPFIRE ALARM ANNUNCIATOR PANELFABLFIRE ALARM BELL	PED PEDESTAL PEND PENDANT
			F SPS WALL MOUNTED FIRE ALARM SPEAKER/STROBE	AFG ABOVE FINISHED GRADE AH AMPERE HOUR	FABX FIRE ALARM BOX FACP FIRE ALARM CONTROL PANEL	PF POWER FACTOR PH PHASE
NORMALLY OPEN RELAY CONTACT		STRIP LIGHT WITH BATTERY	-Q CHIME	AHJ AUTHORITY HAVING JURISDICTION	FC FOOTCANDLE	PNL PANEL
-T FUSE WITH RATING	208Y / 120 V NORMAL PANELBOARD208Y / 120 V CRITICAL PANELBOARD		FA	AIC AMPERE INTERRUPTING CAPACITY ALT ALTERNATE	FI FILM ILLUMINATOR FIXT FIXTURE	POD POWER OPERATED DAMPER PT POTENTIAL TRANSFORMER
MOLDED CASE CIRCUIT BREAKER	208Y / 120 V LIFE SAFETY PANELBOARD		DH ELECTROMAGNETIC TYPE DOOR HOLDER OUTLET	AMB OR AAMBIENTAMPAMPERE	FLAFULL LOAD AMPSFLEXFLEXIBLE METALLIC CONDUIT	PTRV POWER TYPE ROOF VENTILATION PVC POLYVINYL CHLORIDE (PLASTIC)
LOW-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER	208Y / 120 V LIFE EQUIPMENT PANELBOARD		TS TEMPERATURE SWITCH FS FLOW SWITCH	ARCH ARCHITECT ASC AMPS SHORT CIRCUIT	FLT FLOODLIGHT FLUOR FLUORESCENT	PWR POWER
MEDIUM-VOLTAGE OIL CIRCUIT BREAKER	480Y / 277 V NORMAL PANELBOARD 480Y / 277 V CRITICAL PANELBOARD		PS PRESSURE SWITCH	AT AMPERE TRIP ATS AUTOMATIC TRANSFER SWITCH	FLUOR FIX FLUORESCENT FIXTURE FOUTT TELEPHONE FLOOR OUTLET	RCP REFLECTED CEILING PLAN REC RECESSED
O.C.B. MEDIUM-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER	480Y / 277 V LIFE SAFETY PANELBOARD		LS LEVEL SWITCH	AUTO AUTOMATIC AV AUDIO VISUAL	FP FIRE PROTECTION FT FEET OR FOOT	RECPT RECEPTACLE RGS RIGID GALVANIZED STEEL
→ → SWITCH AND FUSE UNIT	480Y / 277 V DISTRIBUTION PANELBOARD		VTS VALVE TAMPER SWITCH	BAT BATTERY	FU SW FUSED SWITCH FVNR FULL VOLTAGE NON-REVERSING	RM ROOM RMS ROOT MEAN SQUARE
– FUSIBLE SWITCH			VSS VALVE SUPERVISORY SWITCH	BC BARE COPPER	FVRR FULL VOLTAGE NON-REVERSING FVR FULL VOLTAGE REVERSING	RMS ROOT MEAN SQUARE REQD REQUIRED
FUSED DRAWOUT POTENTIAL TRANSFORMER	DISTRIBUTION SWITCHBOARD CRITICAL DISTRIBUTION SWITCHBOARD LIFE SAFETY		FACP     FIRE ALARM CONTROL PANEL	BD BOARD BFF BELOW FINISH FLOOR	G OR GND GROUND OR GENERATOR	SCC SHORT CIRCUIT CAPACITY
	DISTRIBUTION SWITCHBOARD EQUIPMENT			BILBASIC INSULATION LEVELBLDGBUILDING	GEN GENERATOR GFCI GROUND FAULT CIRCUIT INTERRUPTI	
CURRENT TRANSFORMER	RECEPTACLE, DUPLEX			BPIPBOILER PLANT INSTRUMENTATION PANELBRKRBREAKER	GTB GROUND TERMINAL BOX	SF SQUARE FOOT (FEET) SHT SHEET
			FIRE FIGHTERS TELEPHONE JACK         RTS/I       REMOTE TEST SWITCH W/INDICATOR	BYP BY PASS	HID HIGH INTENSITY DISCHARGE HOA HAND-OFF-AUTOMATIC	SI INTERNATIONAL SYSTEM OF UNITS SPEC SPECIFICATION
X CABLE AND CONDUIT TAG SEE SCHEDULE	GFCI RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER		RTS/I     REMOTE TEST SWITCH W/INDICATOR       Z     F.A. ZONE ADDRESSABLE MODULE	C CONDUIT CAB CABINET	HP HORSEPOWER HT HEIGHT	SPST SINGLE POLE, SINGLE THROW SURF SURFACE
X EQUIPMENT TAG SEE EQUIPMENT	GFCI RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER		F.A. INDIVIDUAL ADDRESSABLE MODULE	CALC CALCULATE CAP CAPACITY	HZ HERTZ	SW SWITCH SWBD SWITCHBOARD
Y SCHEDULE	RECEPTACLE, QUADRAPLEX		F.A. DOOR HOLDER	CAT CATALOG	IESNA ILLUMINATION ENGINEERING SOCIET	
ST SHUNT TRIP	RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER			CATV COMMUNITY ANTENNA TELEVISION CCR CONTROL CONTACTOR	IMC INTERMEDIATE METAL CONDUIT INCAND INCANDESCENT	TC TIME CLOCK
AMMETER	FLOOR RECEPTACLE, DUPLEX		F.A. DOOR CLOSER       FR       FIRE ALARM SHUT DOWN RELAY	CCTV CLOSED CIRCUIT TELEVISION CB CODE BLUE	IR INFRARED IWH INSTANTANEOUS WATER HEATER	TEL TELEPHONE TP TWISTED PAIR
A	FLOOR RECEPTACLE, DUPLEX ON EMERGENCY POWER		FR FIRE ALARM SHUT DOWN RELAY	cd CANDELA CD CONSTRUCTION DOCUMENTS	J-BOX, JB JUNCTION BOX	TPSTWISTED PAIR SHIELDEDTTBTELEPHONE TERMINAL BOARD
AS AMMETER SELECTOR SWITCH	FLOOR RECEPTACLE, QUADRAPLEX			CF CONTRACTOR FURNISHED CF/CI CONTRACTOR FURNISHED/CONTRACTOR INSTALLED	D kV KILOVOLT	TV TELEVISION TYP TYPICAL
V VOLTMETER	FLOOR RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER	EL	ECTRONIC SAFETY AND SECURITY SYMBOLS	CF/OI CONTRACTOR FURNISHED/OWNER INSTALLED CFE CONTRACTOR FURNISHED EQUIPMENT	kVAKILOVOLT AMPEREkVAHKILOVOLT AMPERE PER HOUR	UFD UNDERFLOOR DUCT
VOLTMETER SELECTOR SWITCH	CEILING MOUNTED RECEPTACLE, L21-20R TWIST LOCK		HCR WALL MOUNTED CARD READER	CHW CHILLED WATER CHWP CHILLED WATER PUMP	kVAR KILOVOLT AMPERE REACTIVE	UGND UNDERGROUND UL UNDERWRITERS LABORATORY
	CEILING MOUNTED RECEPTACLE ON EMERGENCY POWER	ELECTRICAL SYMBOLS - COMM. / DATA PLAN	DC DOOR CONTACT (SN-CSD80-W)	CKT CIRCUIT	kWH KILOWATT HOUR	UON UNLESS OTHERWISE NOTED
	L21-20R TWIST LOCK		ES ELECTRIC STRIKE (DS160I)	CKT BRKR CIRCUIT BREAKER CLF CURRENT LIMITING FUSE	kWHM     KILOWATT HOUR METER	UPS UNINTERRUPTIBLE POWER SUPPLY UTIL UTILITY
CM OWNER METER	TWO-POLE, 3W GROUNDED	3-GANG COMPARTMENT BOX IN FLOOR FOR TELEPHONE, DATA & RECEPTACLE.	ML MAG LOCK	CLG CEILING CMU CONCRETE MASONRY UNIT	LED LIGHT EMITTING DIODE LF LINEAR FEET (FOOT)	V VOLT
KWH KILOWATT HOUR METER	L6-30R TWIST LOCK RECEPTACLE ON EMERGENCY POWER, 250V, TWO-POLE, 3W GROUNDED	THREE PORT TELEPHONE DATA OUTLET - MOUNTED 18" AFF UNLESS OTHERWISE NOTED.	REX       REQUEST TO EXIT PUSH BUTTON         H CR/K       WALL MOUNTED CARD READER WITH KEYPAD	COAX COAX CABLE COMM COMMUNICATION	LM LUMEN LP LIGHT POLE	VA VOLT AMPERE VAR VOLT AMPERE REACTIVE
TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR	ELECTRICAL STRIP MOLD (OUTLETS ON 2'-0" CENTERS OR AS DESIGNATED ON DRAWINGS), MTD 3'-6" AFF OR AS INDICATED.		ACP ACCESS CONTROL PANEL	COMPT COMPARTMENT CONC CONCRETE	LPS LOW PRESSURE SODIUM LRA LOCKED ROTOR AMPS	VFD VARIABLE FREQUENCY DRIVE VOLT VOLTAGE
GROUND FAULT	PP AUTOMATIC DOOR OPERATOR PUSH PLATE	FOUR PORT TELEPHONE/DATA OUTLET - MOUNTED 18" AFF UNLESS OTHERWISE	ACP ACCESS CONTROL PANEL (LNL-AL400ULX)	CONT CONTINUE CONTR CONTRACTOR	LTCP LOCAL TEMPERATURE CONTROL PAN LT LIGHT	NEL W WATT
	I CONDUIT STUBBED DOWN⊖	NOTED. CABLE AND JACK COLOR AS FOLLOW VOICE - WHITE, GREEN - VOIP,	ACCESS CONTROL POWER SULLPY (AL600ULACMCB)	COORD COORDINATE CPT CONTROL POWER TRANSFORMER	LTG LIGHTING LTG PNL LIGHTING PANEL	WHWATER HEATERWPWEATHERPROOF
		BLUE - DATA, RED - DATA	KP     KEYPAD LOCK       AIP     AIPHONE	CRI COLOR RENDERING INDEX CT CURRENT TRANSFORMER	LTNG LIGHTNING LV LOW VOLTAGE	XFER TRANSFER
	FLEXIBLE CONDUIT     POINT OF CONNECTION BETWEEN NEW	FLOOR MOUNTED FOUR PORT TELEPHONE/DATA OUTLET	DC DOOR CONTACT/DOOR POSITION SWITCH	CTV CABLE TELEVISION		XFMR TRANSFORMER
	AND EXISTING WORK	TELEPHONE OUTLET - WALL MOUNTED	RX REQUEST TO EXIT MOTION	CU COPPER CU FT CUBIC FEET	MATV MASTER ANTENNA TELEVISION SYSTI MAX MAXIMUM	
		GETWELL NETWORK DATA OUTLET	ES DOOR LOCKING MECHANISM/ELECT STRIKE ML DOOR LOCKING MECHANISM/MAG LOCK	CUR CURRENT	MC METAL-CLAD MCA MINIMUM CIRCUIT AMPS	
ELECTRICAL SYMBOL - HVAC POWER P	LAN JUNCTION BOX WITH DISCONNECT SWITCH AND FLEXIBLE CONDUIT CONNECTION		SECURITY / DURESS-ALARM BUTTON MOUNTED 3" ABOVE COUNTER TOP / COUNTER TOP BACK SPLAH.	DB DECIBEL OR DIRECT BURIAL DC DIRECT CURRENT	MCB MAIN CIRCUIT BREAKER MCC MOTOR CONTROL CENTER	
	J EQUIPMENT CONNECTION	WAP WIRELESS ACCESS POINT SPEAKER FOR PUBLIC ANNOUNCEMENT	CEILING MOUNTED SECURITY CAMERA	DCP DIMMER CONTROL PANEL DEG C DEGREES CELSIUS	MDP MAIN DISTRIBUTION PANEL MECH MECHANICAL	
1/8HP 1 FAN POWERED BOX	EMERGENCY POWER OFF PUSHBUTTON		C   WALL MOUNTED SECURITY CAMERA	DEG F DEGREES FAHRENHEIT DEMO DEMOLITION	MG MOTOR GENERATOR MH MANHOLE	
	L BELL		ROOF POLE MOUNTED SECURITY CAMERA	DIAG DIAGRAM DISC DISCONNECT	MIN MINIMUM MOCP MAXIMUM OVERCURRENT PROTECTIO	ON
UH 1 UNIT HEATER (GAS OR HOT WATER TYPE)	B BUZZER	COAXIAL OUTLET - CEILING/WALL	CCP     CAMERA CONTROL PANEL	DISC DISCONNECT DISTR DISTRIBUTION DISTR PNL DISTRIBUTION PANEL	MLO MAINION OVERCORRENT PROTECTION MLO MAIN LUGS ONLY MT MOUNT	
	DOCK DOOR POSITION INDICATOR LIGHT	TV TV TV TELEVISION ANTENNA SYSTEM OUTLET - CEILING/WALL	RTLS       REAL TIME LOCATING SYSTEM         QTS       CENTRAX EQUIPMENT TRACKING SYSTEM	DMR SW DIMMER SWITCH	MTD MOUNTED	
10KW EUH (1/8) UNIT HEATER (ELECTRIC	T THERMOSTAT, WALL MOUNTED PULL CORD	TV OUTLET - +84" A.F.F. OTHERWISE NOTED	MID MOTION INTRUSION DETECTOR	DN DOWN DPDT DOUBLE POLE, DOUBLE THROW	MTG MOUNTING MTS MANUAL TRANSFER SWITCH	
1/8HP 1 COIL)	H HUMIDISTAT, WALL MOUNTED		GB GLASS BREAK SENSOR	DPST DOUBLE POLE, SINGLE THROW DRSW DOOR SWITCH	MV MEDIUM VOLTAGE MVA MEGAVOLT-AMPERE	
VAV VAV BOX	MOTORS AND CONTROLS	VFD VARIABLE FREQUENCY DRIVE		DS DISCONNECT SWITCH DWG DRAWING	MW MEGAWATT MICROWAVE	
					NA NOT APPLICABLE NAC NOTIFICATION APPLIANCES CIRCUIT I	PANEL
\$	(XX) SINGLE PHASE MOTOR (HP AS INDICATED)				NEC NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTUR	
FCU CCT. XX	(XX) THREE PHASE (HP AS INDICATED)					
XX 30A/1P	DISCONNECT SWITCH, FUSED (SWITCH/FUSE RATING)					
	30A/20A					GENERAL NOTES
	STARTER, COMBINATION WITH DISCONNECT SWITCH				1. THIS IS A STANDARD LEGEND SHEET.	SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON TH
	STARTER OR MOTOR CONTROLLER				PLANS.	
				410		
	CONSULTANT		Construction and Facilities	TRICAL - SYMBOLS AND REVIATION		roject Title EHRM INFRASTRUCTURE UPGRADES Description Drawing Nur
		S300 Dundee RD. Northbrook, IL 60062 T: 847.952.9362	JOSHUA MIKELS MAIN Management SHE	EET 144 OF 279		Decation       Drawing Num         FARGO VA HEALTH CARE SYSTEM
ISSUE FOR BID	03-18-22	BANCROFT ARCHITECTS + ENGINEERS www.bancroft-ae.com Bancroft Project No: 18-121	3/18/22		Iss	sue Date Checked Drawn BX E
Revisions:	Date:					



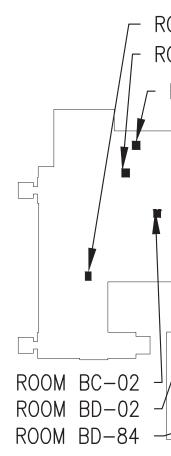
A. CONTRACTOR TO DETERMINE DETAILED CO B. CONDUIT ON PLAN DRAWINGS IS SHOWN F

9

- WIRING AND PANEL DRAWINGS FOR WIRING C. POWER TO WALL OUTLETS AND LIGHTS MUS IN THE SAME BUILDING AS THE TR. CONTRA FIELD CONDITIONS. THESE CONDUITS ARE N DIFFERENT, IT WILL BE NOTED ON THE KEY N
- D. UPS POWER IS ON THE EMERGENCY CRITICAL FROM NORMAL POWER.
- E. EQUIPMENT POWER TO TECHNOLOGY ROOM BRANCH OF EMERGENCY POWER AND MUS POWER. THIS CONDUIT IS NOT SHOWN ON WILL BE NOTED ON THE KEY NOTES.
- F. CONTACT VA IT PRIOR TO WORKING IN IT CL G. FOLLOW VA & NFPA 70E LOCK OUT TAG OUT
- H. SEE PANEL SCHEDULES ON DRAWING SERIES NUMBERS. I. SEE DRAWING SERIES E700 FOR SINGLE LINE
- NOTE THAT KEY NOTES MAINLY APPLY TO NE NOT REQUIRED IN EXISTING IT CLOSETS THA CONTRACTOR TO LEAVE EXISTING UPS OUTI REMAINS IN OLD CLOSET.
- K. UPS POWER TO RACKS / CABINETS IN NEW 1 / CABINETS. NO POWER WIRING ON FLOORS
- L. RECEPTACLES ABOVE RACKS MUST BE NEMA

## ELECTRICAL

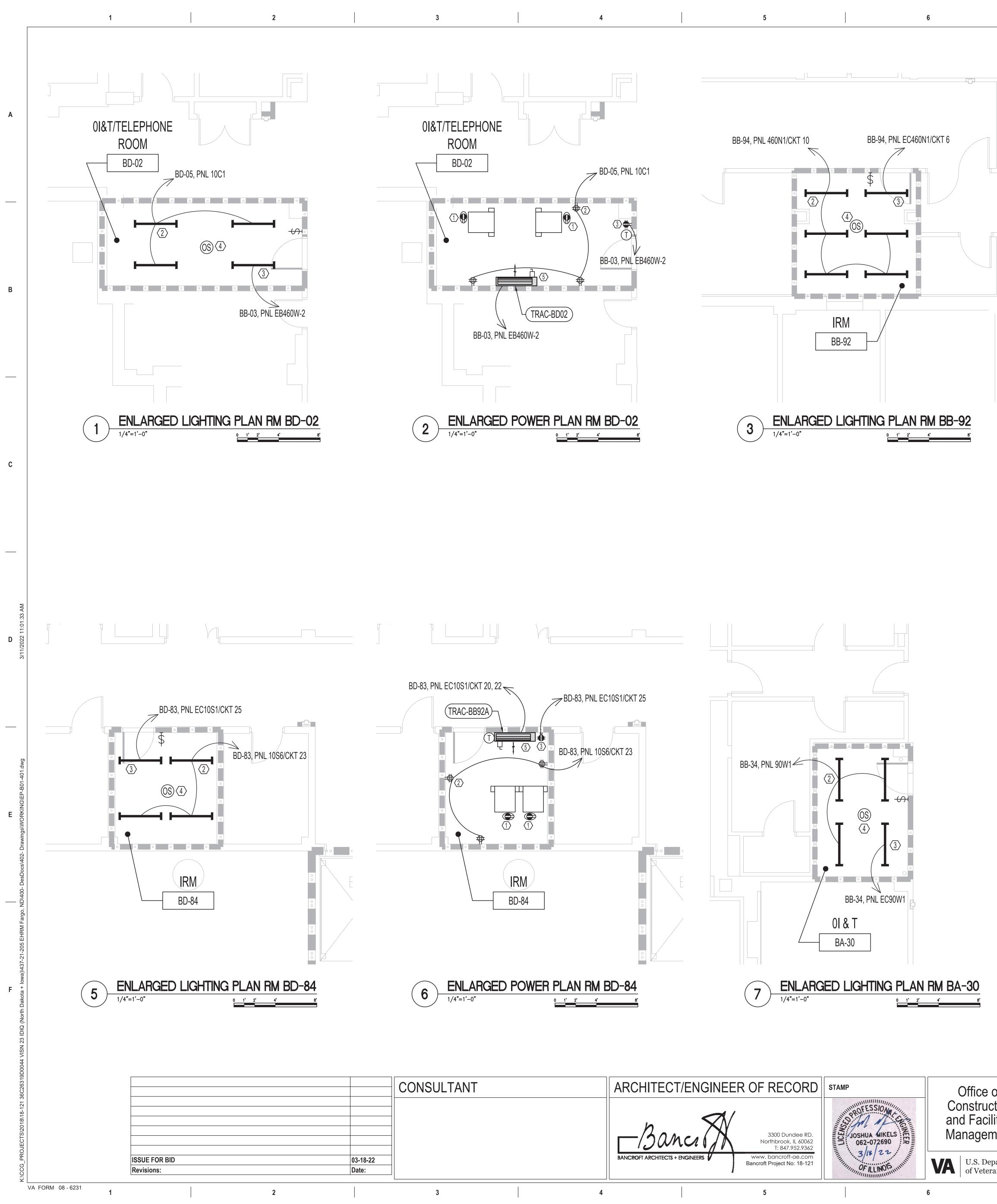
- 1. INSTALL LIGHTING FIXTURES PER LIGHTING SCH LIGHTING TO DETERMINE OPTIMUM LOCATION
- 2. INSTALL LIGHTING CONTROLS PER Nlight DETAI
- 3. RUN UPS CONDUIT #1 INTO ELECTRIC CLOSET B 1B-121A. FIRE STOP CONDUIT BETWEEN FLOOP
- 4. RUN UPS CONDUIT #2 INTO ELECTRIC CLOSET B 1D-03, AND INTO ELECTRIC CLOSET 1D-01 (DRA FLOORS. (DRAWING EP-01-101, PANEL EBUPS01
- 5. ROUTE FEEDER CONDUIT #3 FROM UPS A IN BAS AND UP TO 2<sup>ND</sup> FLOOR ELECTRIC CLOSET 2B-32
- STAIRWELL #1 6. ROUTE FEEDER CONDUIT #4 FROM UPS A IN BAS BC-95 UP TO 2<sup>ND</sup> FLOOR CHASE AND ELECTRIC EBUPS012CB).
  - 7. ROUTE FEEDER CONDUIT #5 FROM UPS A IN BAS BC-95 UP TO 3RD FLOOR CHASE AND ELECTRIC EBUPS463CA).
  - 8. ROUTE FEEDER CONDUITS #6 AND #8 FROM UF ROOM BC-95 UP TO 4TH FLOOR CHASE AND ME PANEL EBUPS014CA).
  - 9. ROUTE FEEDER CONDUIT #7 FROM UPS A IN BAS #40 TR 102B (DRAWING EP-40-101, PANEL - EBL

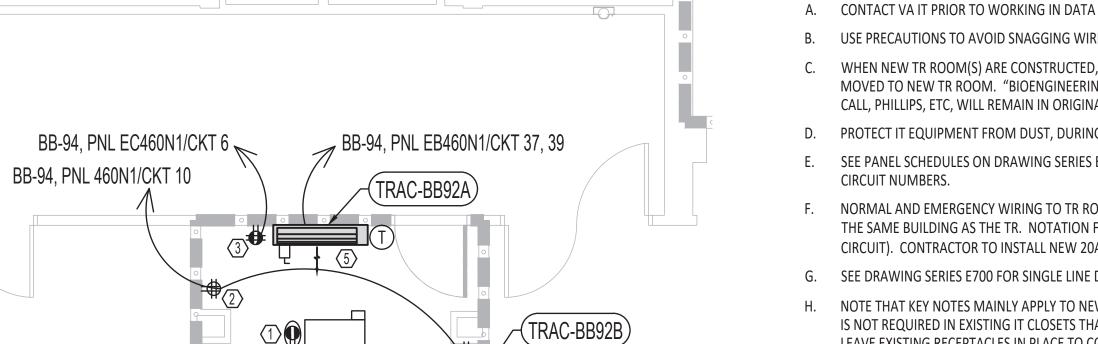


		KEY	PLAN
$\sub$	$\mathcal{D}$		

of	Drawing Title ELECTRICAL - BUILDING 1- BASEMENT PLAN	Phase ISSUE	FOR BID	Project Title EHRM INFRASTRUCTU UPGRADES		
ment	SHEET 145 OF 279				Location FARGO VA HEA	ALTH CA
epartment erans Affairs					Issue Date 3/18/2022	Checked WG
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GENERAL NOTES	
ONDUIT ROUTING BASED ON FIELD CONDITIONS. FOR GENERAL ROUTING PURPOSES ONLY. SEE	
NG AND CONDUIT SIZES. JST BE ROUTED FROM ELECTRIC CLOSETS THAT ARE ACTOR TO SELECT OPTIMAL ROUTING BASED ON NOT SHOWN ON DRAWINGS. IF THIS ROUTING IS NOTES. CAL BRANCH AND MUST BE IN SEPARATE CONDUITS	A
DM FANS AND CONDENSERS IS FROM EQUIPMENT ST BE IN CONDUITS SEPARATE FROM NORMAL N DRAWINGS. IF THIS ROUTING IS DIFFERENT, IT	
CLOSET. JT PROCEDURES FOR SAFETY. ES E600 FOR PANEL SCHEDULES AND CIRCUIT	
IE DRAWINGS. NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS AT REMAIN OPERATIONAL. IN OLD CLOSETS, FLETS IN OPERATION THAT FEED EQUIPMENT THAT	
TR'S MUST BE PROVIDED TO THE TOP OF THE RACKS	В
1A L21-30R, LOCKING RECEPTACLE.	
. KEY NOTES	
HEDULE. CONTACT COR PRIOR TO INSTALLING	
AIL ON DRAWING E502. BB-92, AND UP INTO 1 <sup>ST</sup> FLOOR ELECTRIC CLOSET DRS. (DRAWING EP-01-101, PANEL EBUPS461NA). BB-02, AND UP INTO 1 <sup>ST</sup> FLOOR STORAGE ROOM	с
AWING EP-01-101). FIRE STOP CONDUIT BETWEEN 011CB). ASEMENT UP INTO CHASE LOCATED BY ROOM BB-67 32 (DRAWING EP-01-102, PANEL EBUPS092NA).	
ASEMENT UP INTO CHASE LOCATED BY ROOM C CLOSET 2C-25 (DRAWING EP-01-102, PANEL	
ASEMENT UP INTO CHASE LOCATED BY ROOM C CLOSET 3C-38 (DRAWING EP-01-103, PANEL	
IPS A IN BASEMENT UP INTO CHASE LOCATED BY MECHANICAL ROOM 4D-06 (DRAWING EP-01-104,	
ASEMENT UP INTO BLDG #40 HALLWAY TO BLDG BUPS401WA).	D
ROOM BA-30	E
ROOM BA-30 ROOM BB-92 - ROOM BC-50A	
	F
Project Number	
CTURE 437-21-205 Building Number	
01, 09, 46 CARE SYSTEM	
CARE STSTEIVI     ked   Drawn     BX   EP-01-100	





**BB-94**, PNL EB460N1/CKT 36, 38

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1/4"=1'-0"

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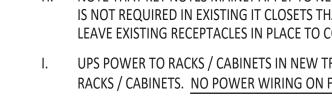
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BB-92

ENLARGED POWER PLAN RM BB-92

0 1' 2' 4'

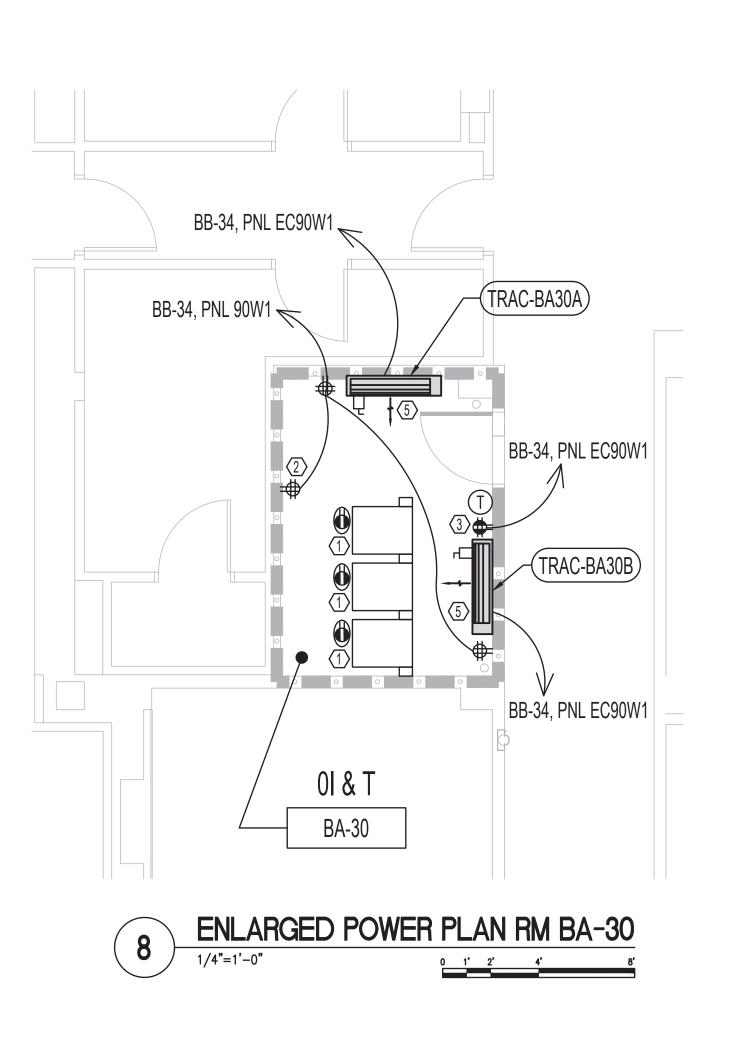


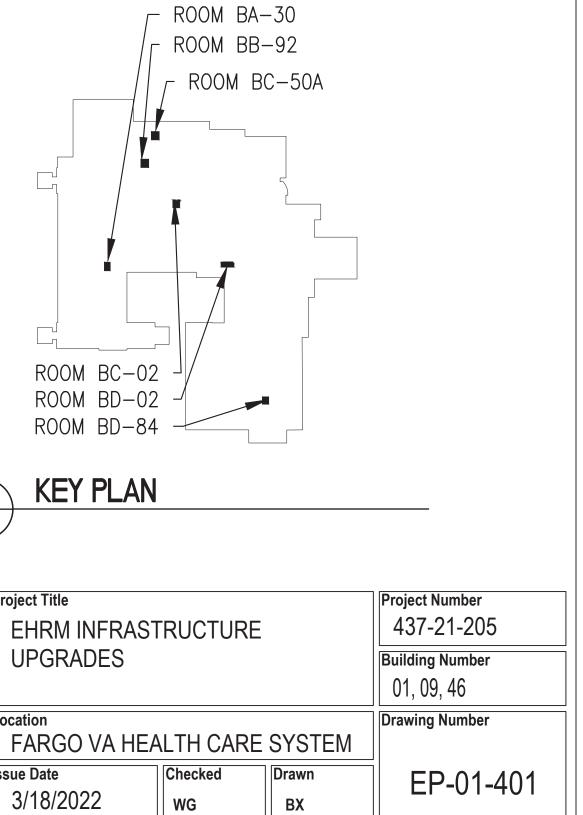
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- RECEPTACLES ABOVE RACKS MUST BE NEMA K. INSTALL LIGHTING CONTROLS PER LIGHTING
- L. CONTRACTOR TO REFER TO DETAIL ON DRAV
- SCHEDULE AND WIRE SIZING PER DRAWING M. PANEL CIRCUIT NUMBERS ARE SUGGESTIONS

#### ELECTRICAL KEY NOTES $\langle X \rangle$

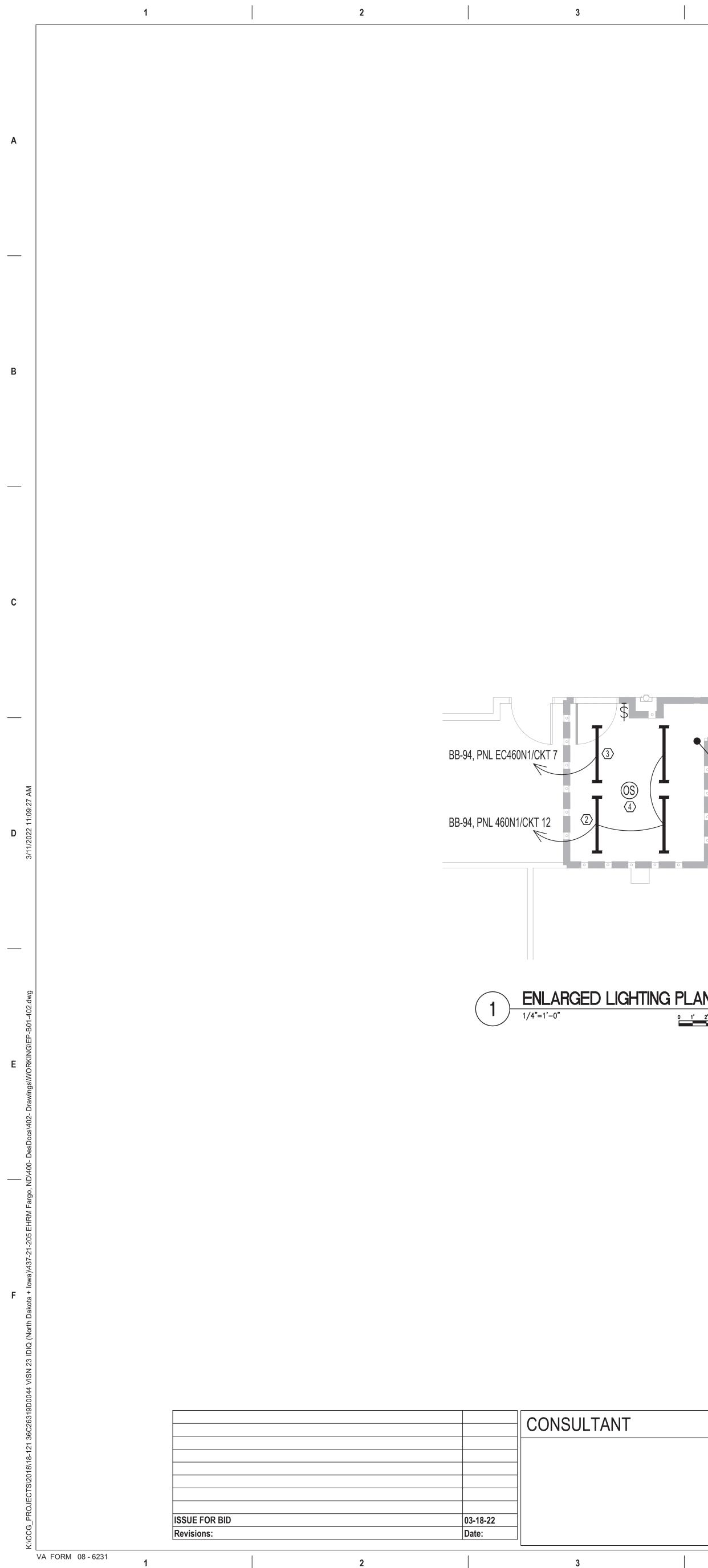
- 1. UPS POWER TO RACKS.
- 2. NORMAL POWER TO ROOM RECEPTACLES, AND LIGHTS. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.
- 3. EMERGENCY POWER TO ROOM RECEPTACLES AND LIGHTS. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES. 4. OCCUPANCY SENSOR - HIGH MOUNT.
- 5. ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT, CONTRACTOR TO WORK WITH MECHANICAL CONTRACTOR TO ROUTE POWER AND TUBING TO OUTDOOR UNIT.

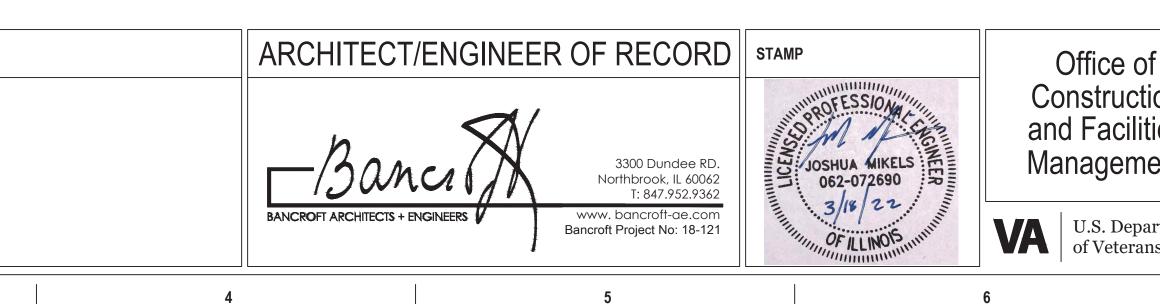




of	Drawing Title ELETRICAL - BUILDING ENLARGED PLANS - BAS	1-9-40 -	Phase ISSUE FOR BID	Project Title EHRM INFRAS UPGRADES	TRUCTI
ment	SHEET 146 OF 279			Location FARGO VA HE	
epartment rans Affairs				Issue Date 3/18/2022	Checked WG
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	ELECTRICAL GENERAL NOTES
_	
	CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET.
	USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT.
	WHEN NEW TR ROOM(S) ARE CONSTRUCTED, IT COMMUNICATIONS EQUIPMENT WILL BE MOVED TO NEW TR ROOM. "BIOENGINEERING" TYPE EQUIPMENT, I.E. SECURITY, NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINAL CLOSET, AND MUST REMAIN OPERATIONAL.
	PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST.
	SEE PANEL SCHEDULES ON DRAWING SERIES E600 FOR UPS PANEL SCHEDULES AND UPS CIRCUIT NUMBERS.
	NORMAL AND EMERGENCY WIRING TO TR ROOM LIGHTS AND RECEPTACLES IS SHOWN IN THE SAME BUILDING AS THE TR. NOTATION FOR EACH CIRCUIT IS (ROOM, PANEL AND CIRCUIT). CONTRACTOR TO INSTALL NEW 20A BREAKERS AND UPDATE PANEL CIRCUIT INDEX.
	SEE DRAWING SERIES E700 FOR SINGLE LINE DRAWINGS.
	NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL. CONTRACTOR TO LEAVE EXISTING RECEPTACLES IN PLACE TO CONTINUE POWERING EXISTING EQUIPMENT.
	UPS POWER TO RACKS / CABINETS IN NEW TR's MUST BE PROVIDED TO THE TOP OF THE RACKS / CABINETS. <u>NO POWER WIRING ON FLOORS!</u>
	RECEPTACLES ABOVE RACKS MUST BE NEMA L21-30R, LOCKING RECEPTACLES.
	INSTALL LIGHTING CONTROLS PER LIGHTING DETAIL ON DETAIL DRAWING.
	CONTRACTOR TO REFER TO DETAIL ON DRAWING E501 TO WIRE AC UNITS PER MECHANICAL SCHEDULE AND WIRE SIZING PER DRAWING E001.
	PANEL CIRCUIT NUMBERS ARE SUGGESTIONS, CONTRACTOR TO SELECT BREAKERS AND CIRCUIT NUMBERS BASED ON FIELD CONDITIONS AT TIME OF INSTALLATION.



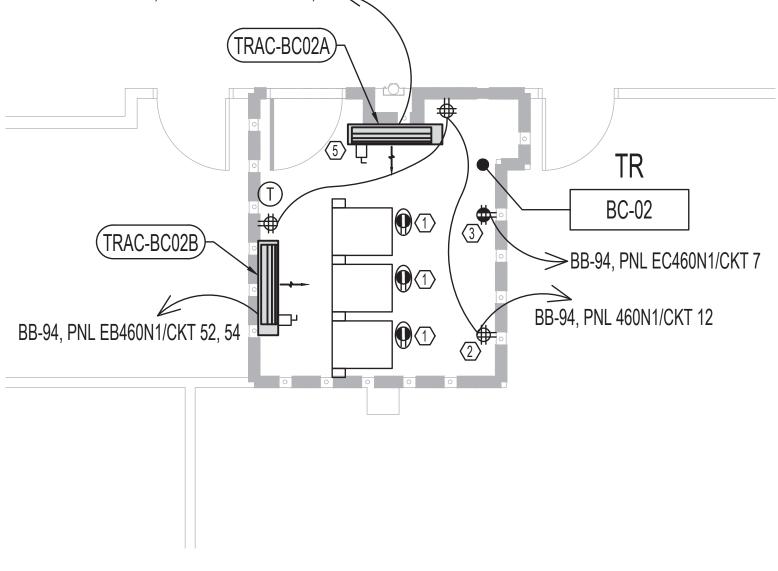


ENLARGED LIGHTING PLAN RM BC-02 0 1' 2' 4'

BC-02

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BB-94, PNL EB460N1/CKT 36, 38 ≪

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- CIRCUIT NUMBERS.

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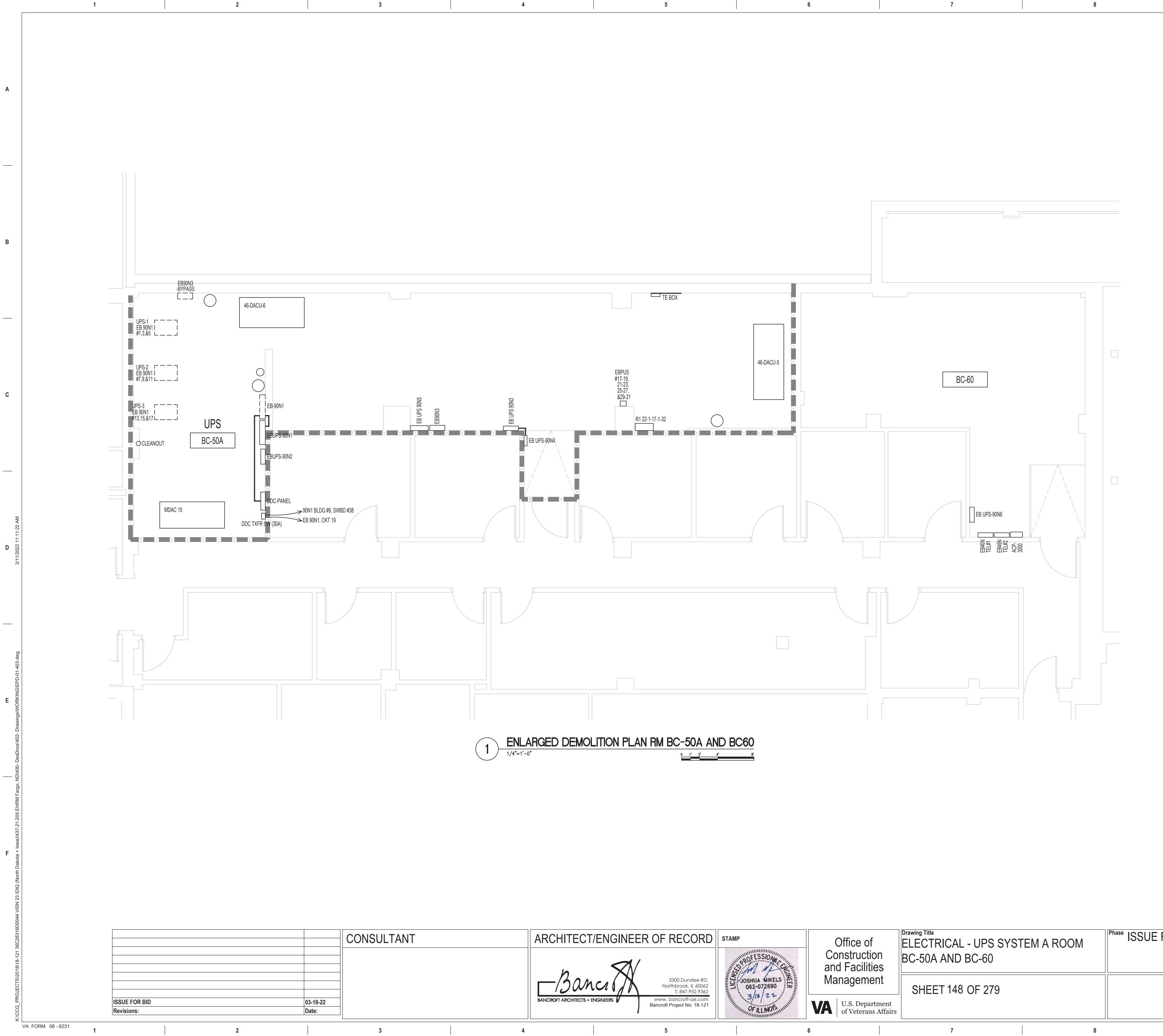
- 1. UPS POWER TO RACKS.

- 4. OCCUPANCY SENSOR HIGH MOUNT.
- TUBING TO OUTDOOR UNIT.

ENLARGED POWER PLAN RM BC-02 0 1' 2' 4'



of ction lities	Drawing Title ELETRICAL - BUILDING 1-9-46 - ENLARGED PLANS - BASEMENT			Phase ISSUE F	OR BID	Project Title EHRM INFRA UPGRADES	ASTRUCTI
nent	SHEET 147 OF 279					Location FARGO VA H	IEALTH C
partment ans Affairs						Issue Date 3/18/2022	Checked WG
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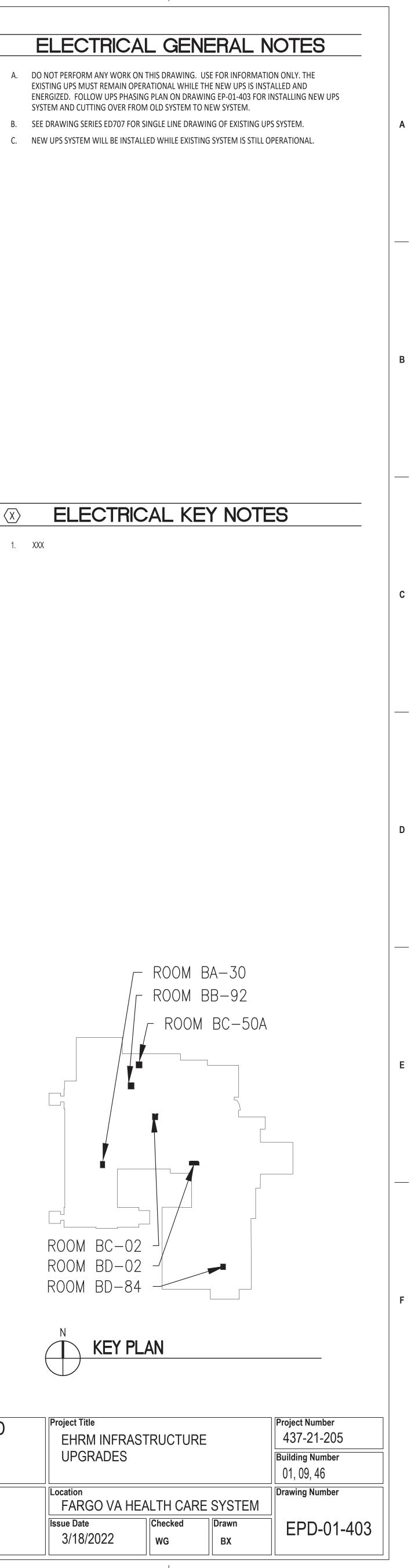


BANCROFT ARCHITECTS + ENGINEERS	3300 Dundee RD. Northbrook, IL 60062 T: 847.952.9362 www. bancroft-ae.com Bancroft Project No: 18-121	JOSHUA MIKELS 062-072690	Cor and Man

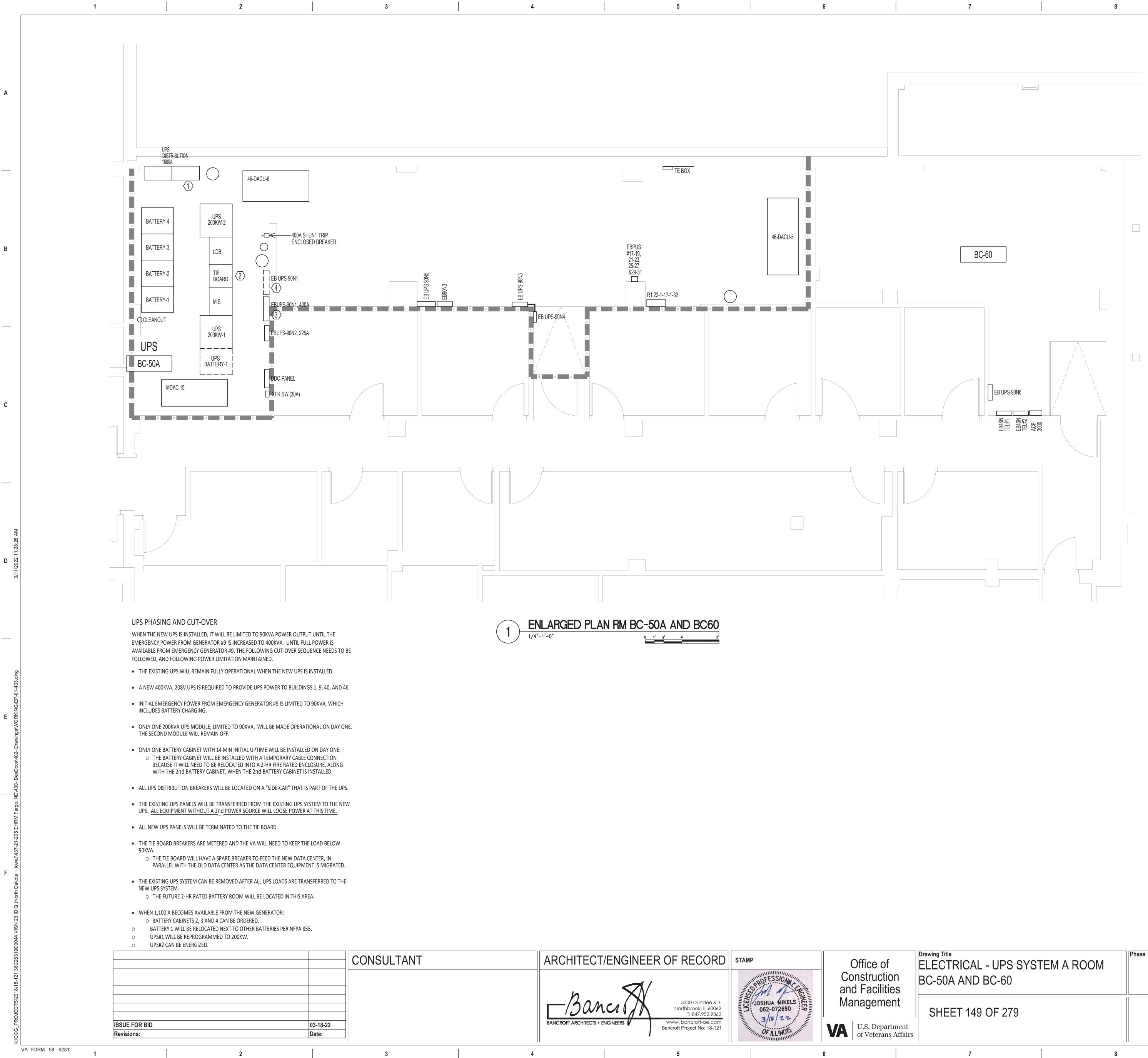
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at! a la	Drawing Title ELECTRICAL - UPS SYSTEM A ROOM BC-50A AND BC-60			Phase ISSUE F	FOR BID	Project Title EHRM INFRASTRUC UPGRADES		
ment epartment erans Affairs	SHEET 148 OF 279					Location FARGO VA HE Issue Date 3/18/2022	ALTH CA	
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ARCHITECT/ENGINEE	R OF RECORD	STAMP	Office
-Bancit	3300 Dundee RD. Northbrook, IL 60062 T: 847.952.9362	JOSHUA MIKELS 062-072690	Construct and Faci Manager
BANCROFT ARCHITECTS + ENGINEERS	www.bancroft-ae.com Bancroft Project No: 18-121	OF ILLINOIS	VA U.S. De of Veter

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- ENERGIZED.
- FROM NORMAL POWER.

- OLD SYSTEM TO NEW SYSTEM.

## $\langle X \rangle$

- ALSO CHARGE THEIR BATTERIES.

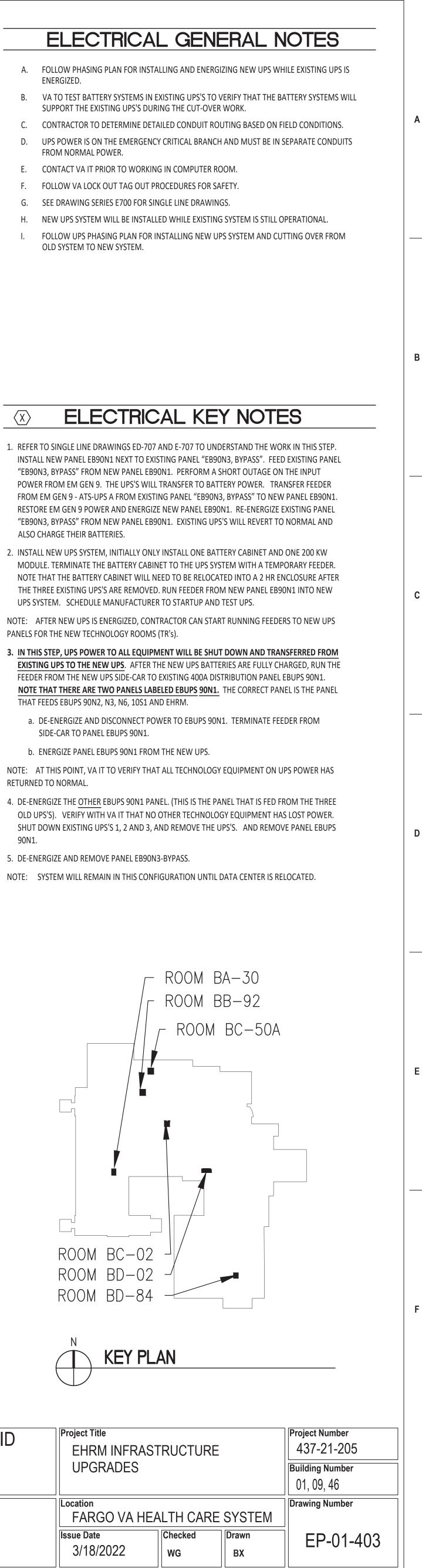
PANELS FOR THE NEW TECHNOLOGY ROOMS (TR's).

- THAT FEEDS EBUPS 90N2, N3, N6, 10S1 AND EHRM.
- SIDE-CAR TO PANEL EBUPS 90N1.

RETURNED TO NORMAL.

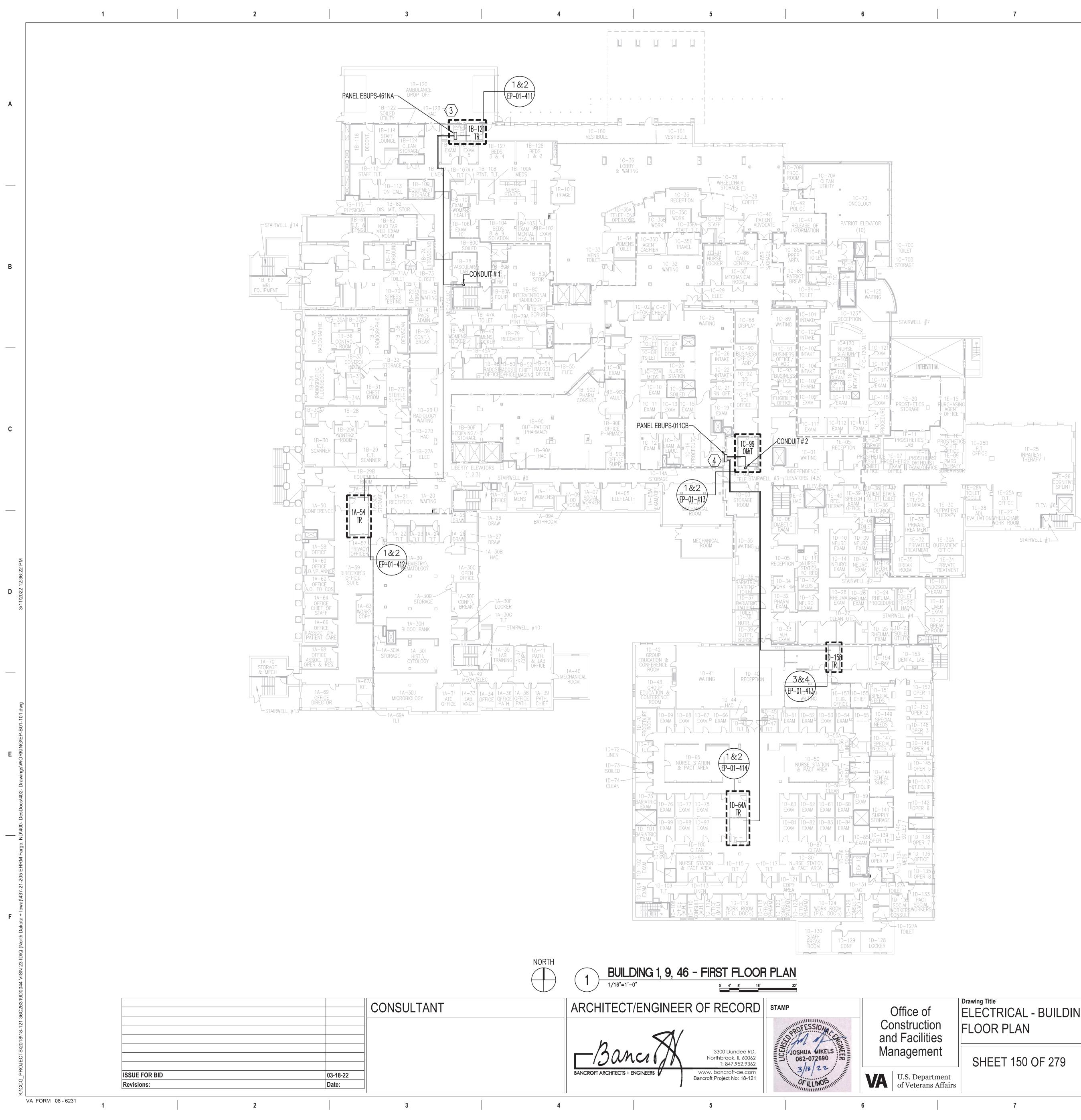
90N1.

5. DE-ENERGIZE AND REMOVE PANEL EB90N3-BYPASS.





of	Drawing Title ELECTRICAL - UPS SYSTEM A ROOM BC-50A AND BC-60			Phase ISSUE F	OR BID	Project Title EHRM INFRASTRUC UPGRADES		
ment	SHEET 149 OF 279					Location FARGO VA HEA	ALTH C	
epartment erans Affairs						Issue Date 3/18/2022	Checked WG	
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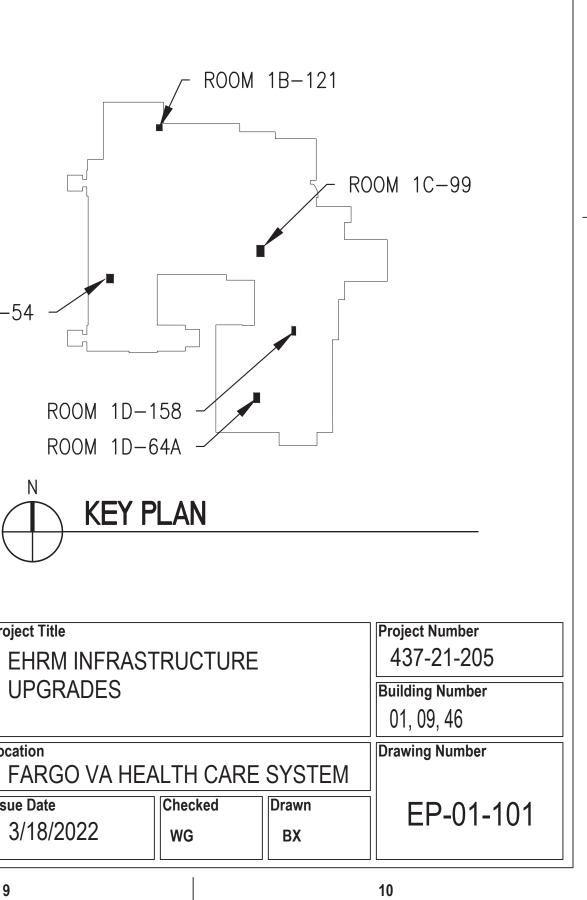
- A. CONTRACTOR TO DETERMINE DETAILED CON B. ROUTE FEEDER CONDUIT #1 FROM UPS A IN F (DRAWING EP-01-10B), THEN UP INTO 1<sup>ST</sup> NEW PANEL EBUPS461NA. CONTRACTOR TO
- C. ROUTE FEEDER CONDUIT #2 FROM UPS A IN B 1D-01 AND INSTALL NEW PANEL EBUPS011CE ON FIELD CONDITIONS. D. NORMAL AND EMERGENCY WIRING TO TR RC
- SAME BUILDING AS THE TR. NOTATION FOR CONTRACTOR TO INSTALL NEW 20A BREAKER E. UPS POWER IS ON THE EMERGENCY CRITICAL
- FROM NORMAL POWER. F. EQUIPMENT POWER TO TECHNOLOGY ROOM
- BRANCH OF EMERGENCY POWER AND MUST POWER. CONTRACTOR TO REFER TO DETAIL MECHANICAL SCHEDULE AND WIRE SIZING PE G. CONTACT VA IT PRIOR TO WORKING IN IT CLO
- H. FOLLOW VA LOCK OUT TAG OUT PROCEDURI I. SEE PANEL SCHEDULES ON DRAWING SERIES
- NUMBERS. J. SEE DRAWING SERIES E700 FOR SINGLE LINE
- K. NOTE THAT KEY NOTES MAINLY APPLY TO NE IS NOT REQUIRED IN EXISTING IT CLOSETS TH
- L. UPS POWER TO RACKS / CABINETS IN NEW T RACKS / CABINETS. NO POWER WIRING ON I
- M. RECEPTACLES ABOVE RACKS MUST BE NEMA

#### ELECTRICAL KEY NOTES $\langle X \rangle$

- 1. INSTALL LIGHTING FIXTURES PER LIGHTING SCHEDULE. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.
- 2. INSTALL LIGHTING CONTROLS PER nLIGHT detail ON DRAWING E501.
- 3. INSTALL PANEL EBUPS461NA IN ELECTRIC CLOSET 1B-121A , ON WALL BEHIND THE DOOR. PER NEC AND MAINTAIN 3 FT EXCLUSION AREA IN FRONT OF PANEL.
- 4. INSTALL PANEL UPS 1B IN ELECTRIC CLOSET 1D-01 ON EAST WALL AND RELOCATE THE PANEL THAT IS THERE, PER NEC AND MAINTAIN 3 FT EXCLUSION AREA IN FRONT OF PANEL.

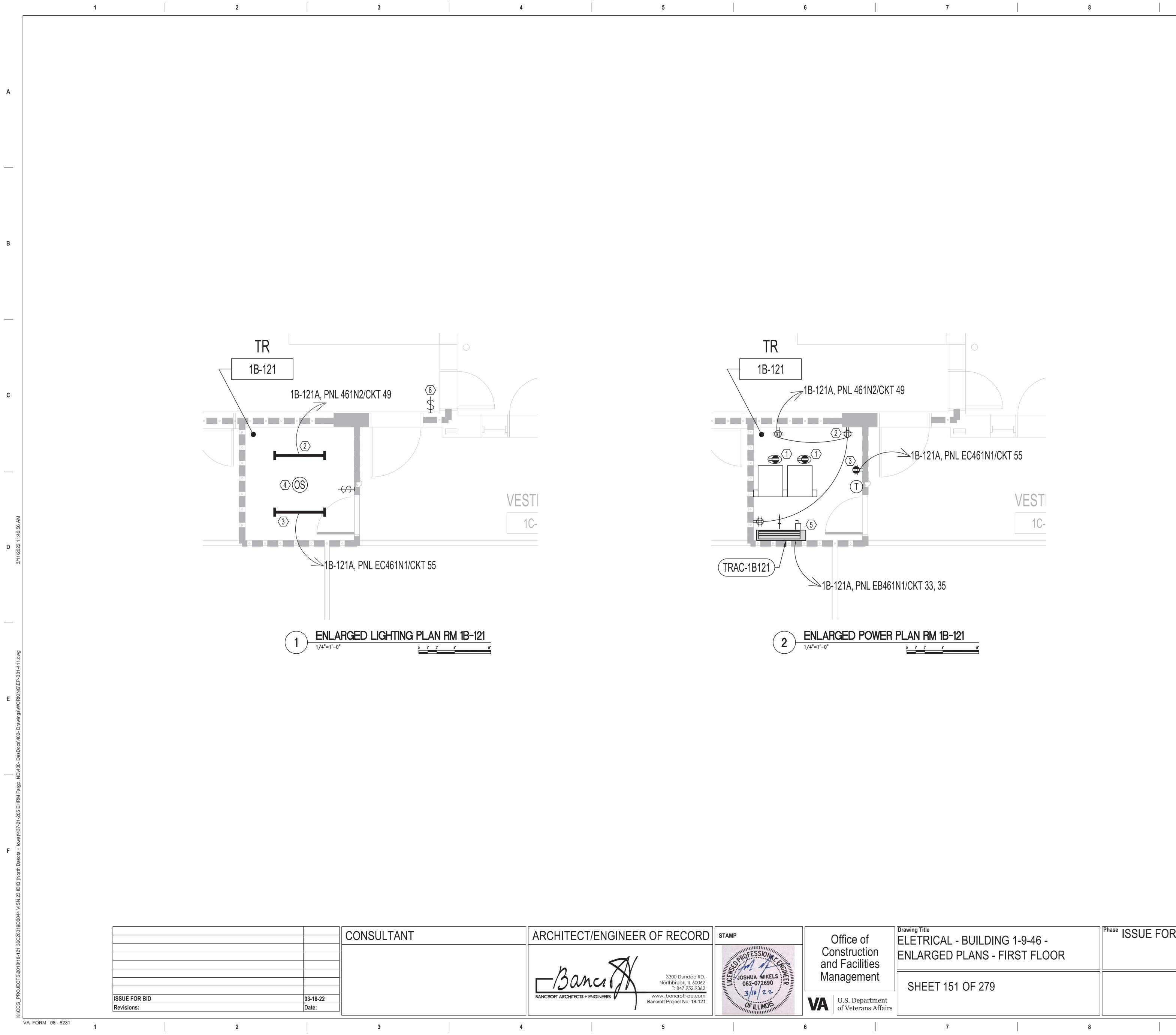
# ROOM 1A-54

ROOM 1D-158



of	Drawing Title ELECTRICAL - BUILDING 1-9-46 - FIRST FLOOR PLAN			Phase ISSUE FOR BID	Project Title EHRM INFR/ UPGRADES	
ment	SHEET 150 OF 279				Location FARGO VA I	HEALTH CA
epartment rans Affairs					Issue Date 3/18/2022	Checked WG
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ENERAL NOTES
NDUIT ROUTING BASED ON FIELD CONDITIONS.
N BASEMENT, INTO ELECTRIC CLOSET BB-94 FLOOR ELECTRIC CLOSET 1B-121A AND INSTALL O LOCATE PANEL BASED ON FIELD CONDITIONS.
N BASEMENT UP INTO 1 <sup>ST</sup> FLOOR ELECTRIC CLOSET CB. CONTRACTOR TO LOCATE NEW PANEL BASED
ROOM LIGHTS AND RECEPTACLES IS SHOWN IN THE R EACH CIRCUIT IS (ROOM, PANEL AND CIRCUIT). ERS AND UPDATE PANEL CIRCUIT INDEX.
AL BRANCH AND MUST BE IN SEPARATE CONDUITS
IM FANS AND CONDENSERS IS FROM EQUIPMENT ST BE IN CONDUITS SEPARATE FROM NORMAL L ON DRAWING E501 TO WIRE AC UNITS PER PER DRAWING E001.
LOSET.
RES FOR SAFETY.
S E600 FOR PANEL SCHEDULES AND CIRCUIT
E DRAWINGS.
IEW/RELOCATED TR CLOSETS. ELECTRICAL WORK HAT REMAIN OPERATIONAL.
TR's MUST BE PROVIDED TO THE TOP OF THE FLOORS!
A L21-30R, LOCKING RECEPTACLE.



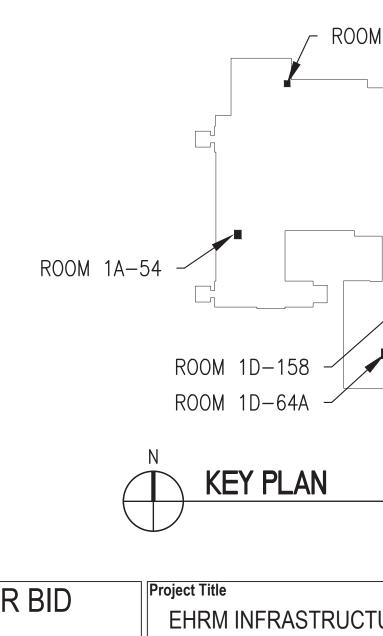
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## ELECTRICAL GE

- A. CONTACT VA IT PRIOR TO WORKING IN DATA ( B. USE PRECAUTIONS TO AVOID SNAGGING WIRI C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED, MOVED TO NEW TR ROOM. "BIOENGINEERIN CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINA
- D. PROTECT IT EQUIPMENT FROM DUST, DURING E. SEE PANEL SCHEDULES ON DRAWING SERIES E CIRCUIT NUMBERS.
- F. NORMAL AND EMERGENCY WIRING TO TR ROO THE SAME BUILDING AS THE TR. NOTATION FO CIRCUIT). CONTRACTOR TO INSTALL NEW 20A
- G. SEE DRAWING SERIES E700 FOR SINGLE LINE D H. NOTE THAT KEY NOTES MAINLY APPLY TO NEW IS NOT REQUIRED IN EXISTING IT CLOSETS THA
- I. UPS POWER TO RACKS / CABINETS IN NEW TR'
- RACKS / CABINETS. NO POWER WIRING ON F J. RECEPTACLES ABOVE RACKS MUST BE NEMA L
- K. INSTALL LIGHTING CONTROLS PER LIGHTING E

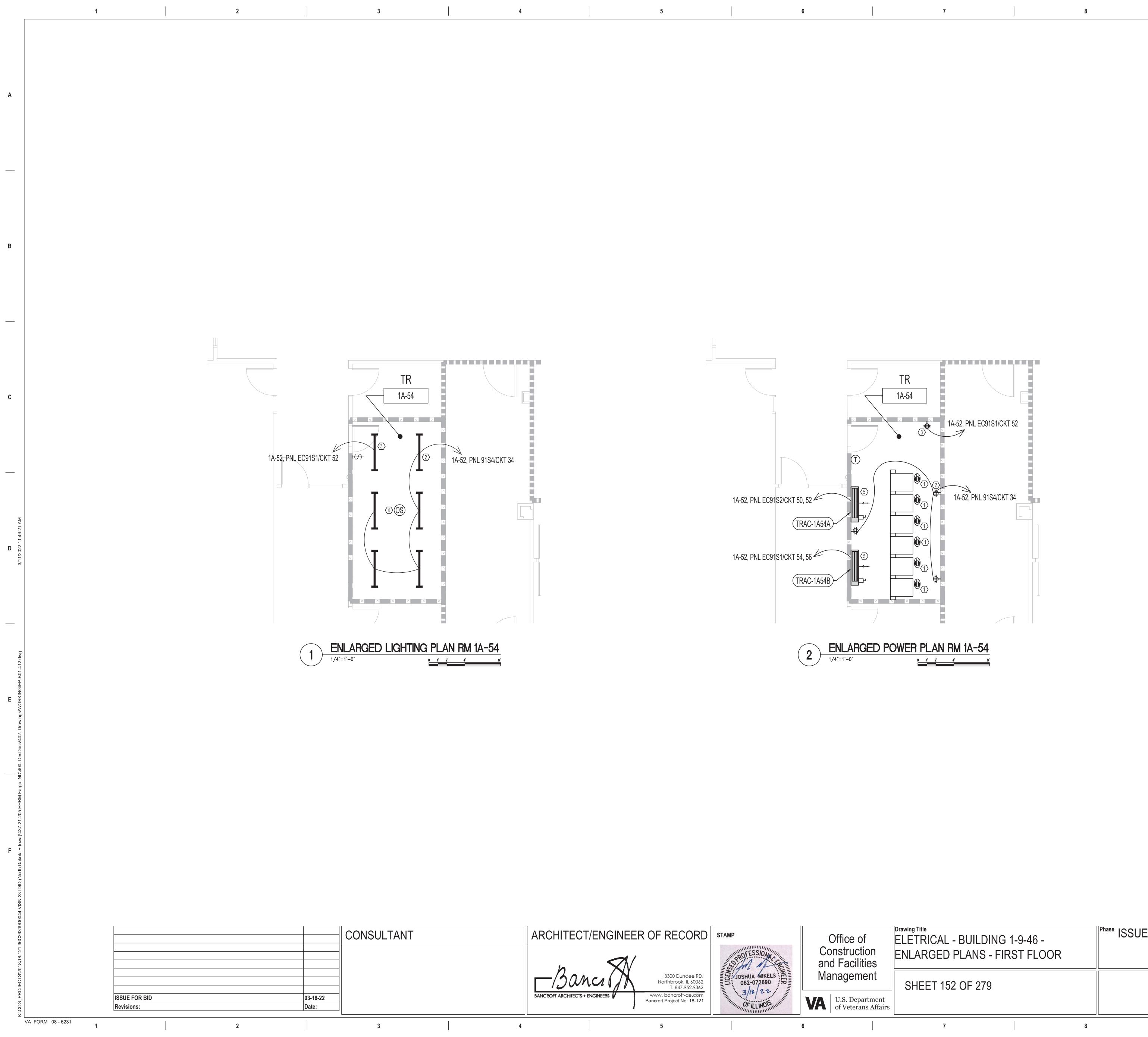
#### ELECTRICAL $\langle X \rangle$

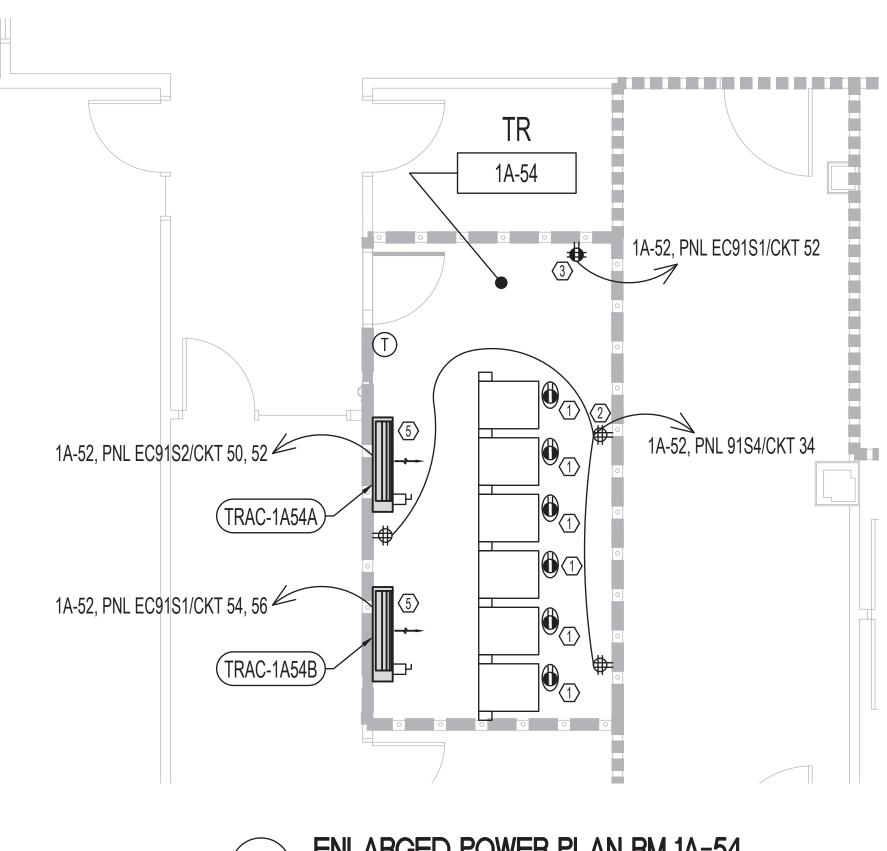
- 1. UPS POWER TO RACKS.
- 2. NORMAL POWER TO ROOM RECEPTACLES, AN INSTALLING LIGHTING TO DETERMINE OPTIMU
- 3. EMERGENCY POWER TO ROOM RECEPTACLES INSTALLING LIGHTING TO DETERMINE OPTIMU
- 4. OCCUPANCY SENSER HIGH MOUNT.
- 5. ONLY BRANCH CIRCUIT IS SHOWN FROM POW CONDUIT AND WIRE PER DETAIL ON DRAWING MECHANICAL CONTRACTOR TO ROUTE POWER
- 6. RELOCATE LIGHT SWITCH ON DOORWAY TO R AND RETERMINATE DOOR OPENER.



of	Drawing Title ELETRICAL - BUILDING 1-9-46 - ENLARGED PLANS - FIRST FLOOR			Phase ISSUE FOF	R BID	Project Title EHRM INFRASTRU UPGRADES	
ment	SHEET 151 OF 279					Location FARGO VA HE	ALTH CA
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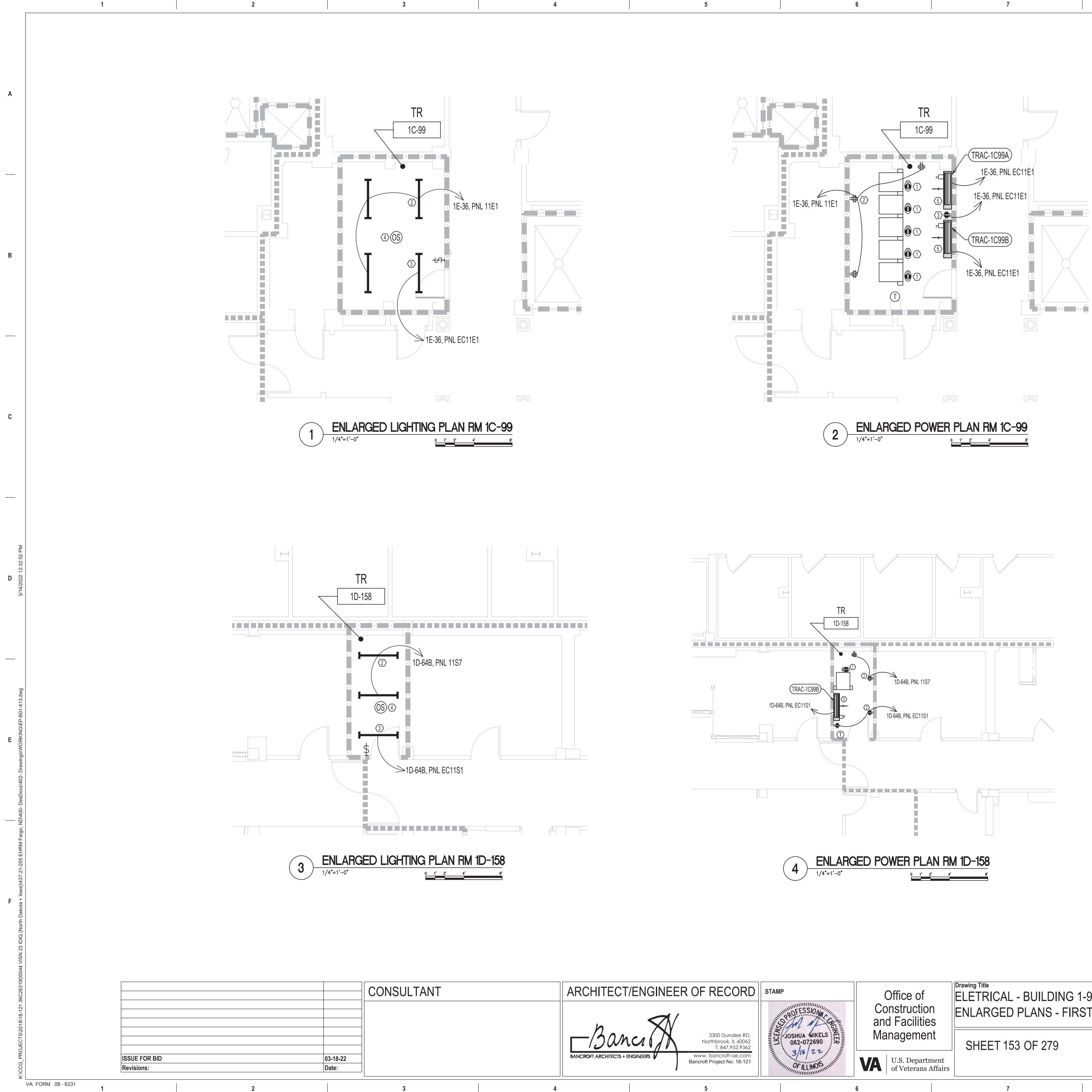
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A CENTER OR IT CLOSET. RING OR DAMAGING EQUIP	MENT.	
D, IT COMMUNICATIONS EQ ING" TYPE EQUIPMENT, I.E. S NAL CLOSET, AND MUST REN NG WORK THAT CREATES DU	SECURITY, NURSE //AIN OPERATIONAL.	A
S E600 FOR UPS PANEL SCHE	DULES AND UPS	
OOM LIGHTS AND RECEPTA FOR EACH CIRCUIT IS (ROOI OA BREAKERS AND UPDATE I	M, PANEL AND	
E DRAWINGS. EW/RELOCATED TR CLOSETS HAT REMAIN OPERATIONAL. FR's MUST BE PROVIDED TO		
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DETAIL ON DRAWING E501		
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KEY NOT	ES	
AND LIGHTS. CONTACT COR MUM LOCATION FOR LIGHT		
ES AND LIGHTS. CONTACT C	OR PRIOR TO	
MUM LOCATION FOR LIGHT	FIXTURES.	
OWER PANEL TO COOLING UN NG E501. CONTRACTOR TO V VER AND TUBING TO OUTDO	WORK WITH	
ROOM 1C-100 TO OTHER SI	DE OF DOOR,	
		С
		D
		Е
M 1B-121		
ROOM	1 1C-99	
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	Project Number	
TURE	437-21-205 Building Number	
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CARE SYSTEM	Drawing Number	
ed Drawn G BX	EP-01-411	





	ELECTRICAL GENERAL NOTES	
A.	CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET.	
B.	USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT.	
C.	WHEN NEW TR ROOM(S) ARE CONSTRUCTED, IT COMMUNICATIONS EQUIPMENT WILL BE MOVED TO NEW TR ROOM. "BIOENGINEERING" TYPE EQUIPMENT, I.E. SECURITY, NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINAL CLOSET, AND MUST REMAIN OPERATIONAL.	Α
D.	PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST.	
E.	SEE PANEL SCHEDULES ON DRAWING SERIES E600 FOR UPS PANEL SCHEDULES AND UPS CIRCUIT NUMBERS.	
F.	NORMAL AND EMERGENCY WIRING TO TR ROOM LIGHTS AND RECEPTACLES IS SHOWN IN THE SAME BUILDING AS THE TR. NOTATION FOR EACH CIRCUIT IS (ROOM, PANEL AND CIRCUIT) CONTRACTOR TO INSTALL NEW 200 RECEVERS AND LIDRATE RANEL CIRCUIT INDEX	
G.	CIRCUIT). CONTRACTOR TO INSTALL NEW 20A BREAKERS AND UPDATE PANEL CIRCUIT INDEX. SEE DRAWING SERIES E700 FOR SINGLE LINE DRAWINGS.	
H.	NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL.	
I.	UPS POWER TO RACKS / CABINETS IN NEW TR'S MUST BE PROVIDED TO THE TOP OF THE RACKS / CABINETS. NO POWER WIRING ON FLOORS!	
J.	RECEPTACLES ABOVE RACKS MUST BE NEMA L21-30R, LOCKING RECEPTACLES.	
К.	INSTALL LIGHTING CONTROLS PER LIGHTING DETAIL ON DETAIL DRAWING.	
$\langle X \rangle$	ELECTRICAL KEY NOTES	В
1.	UPS POWER TO RACKS.	
2.	NORMAL POWER TO ROOM RECEPTACLES, AND LIGHTS. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.	
3.	EMERGENCY POWER TO ROOM RECEPTACLES AND LIGHTS. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.	
4.	OCCUPANCY SENSOR - HIGH MOUNT.	
5.	ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT. INSTALL CONDUIT AND WIRE PER DETAIL ON DRAWING E501. CONTRACTOR TO WORK WITH	
	MECHANICAL CONTRACTOR TO ROUTE POWER AND TUBING TO OUTDOOR UNIT.	
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	ROOM 1B-121	
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ROOM	1A-54	
	ROOM 1D-158	
	ROOM 1D-138 ROOM 1D-64A	F
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	KEY PLAN	
	Project Title	
OR BID	EHRM INFRASTRUCTURE 437-21-205	
	UPGRADES Building Number 01, 09, 46	
	Location Drawing Number	
	FARGO VA HEALTH CARE SYSTEM     Issue Date   Checked	
	3/18/2022 Checked BX EP-01-412	

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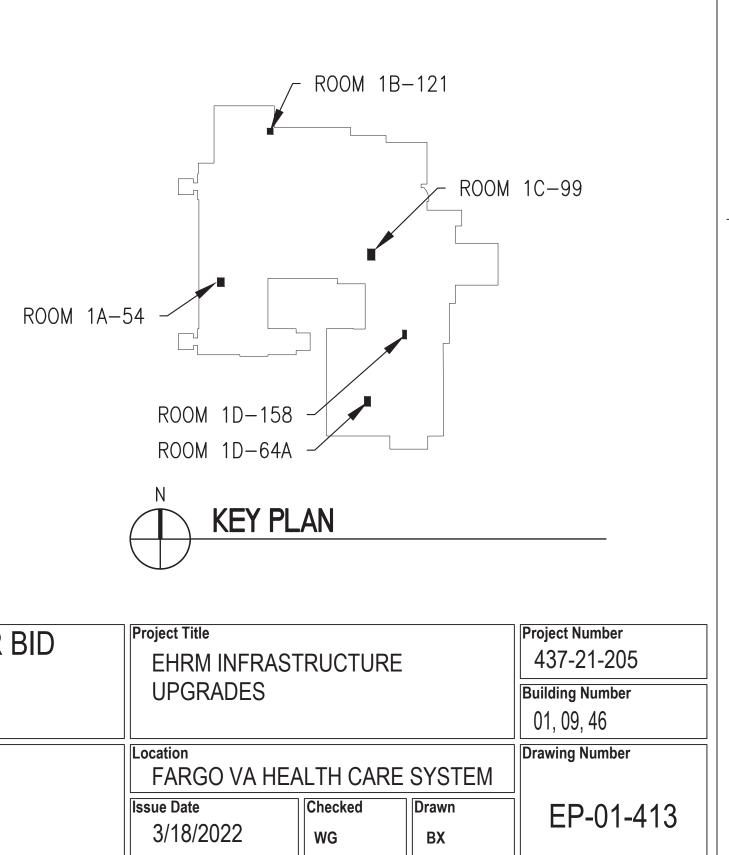
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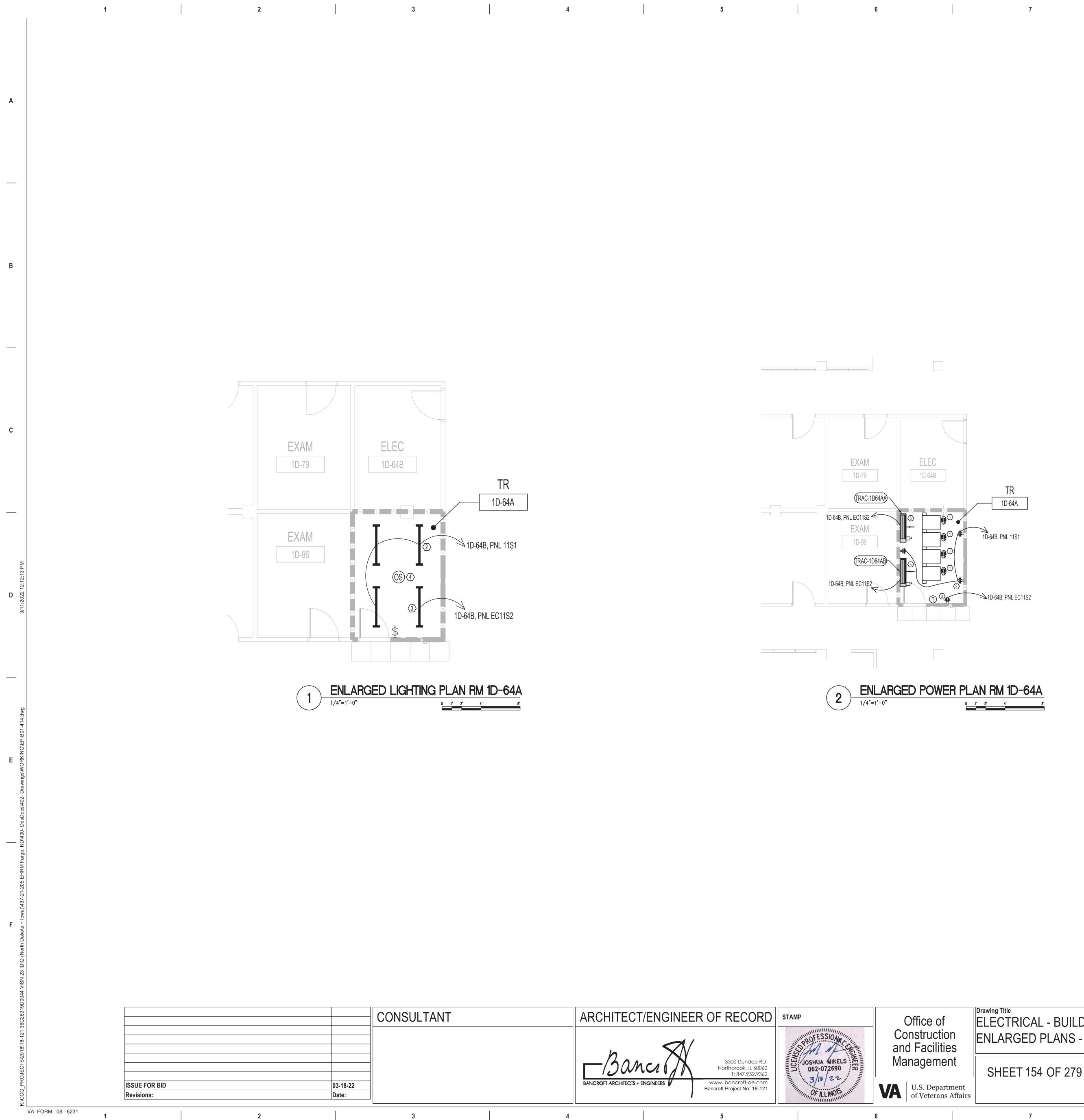
- A. CONTACT VA IT PRIOR TO WORKING IN DATA
  B. USE PRECAUTIONS TO AVOID SNAGGING WIRI
  C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED, MOVED TO NEW TR ROOM. "BIOENGINEERIN
- CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINAL
  D. PROTECT IT EQUIPMENT FROM DUST, DURING
  E. SEE PANEL SCHEDULES ON DRAWING SERIES EE
- CIRCUIT NUMBERS.
   F. NORMAL AND EMERGENCY WIRING TO TR RO THE SAME BUILDING AS THE TR. NOTATION F CIRCUIT). CONTRACTOR TO INSTALL NEW 204
- G. SEE DRAWING SERIES E700 FOR SINGLE LINE E
  H. NOTE THAT KEY NOTES MAINLY APPLY TO NEV
- IS NOT REQUIRED IN EXISTING IT CLOSETS TH
- RACKS / CABINETS. NO POWER WIRING ON FI
- J. RECEPTACLES ABOVE RACKS MUST BE NEMAK. INSTALL LIGHTING CONTROLS PER LIGHTING I
- L. PANEL CIRCUITS ARE SUGGESTIONS. CONTRA BASED ON FIELD CONDITIONS DURING WIRIN

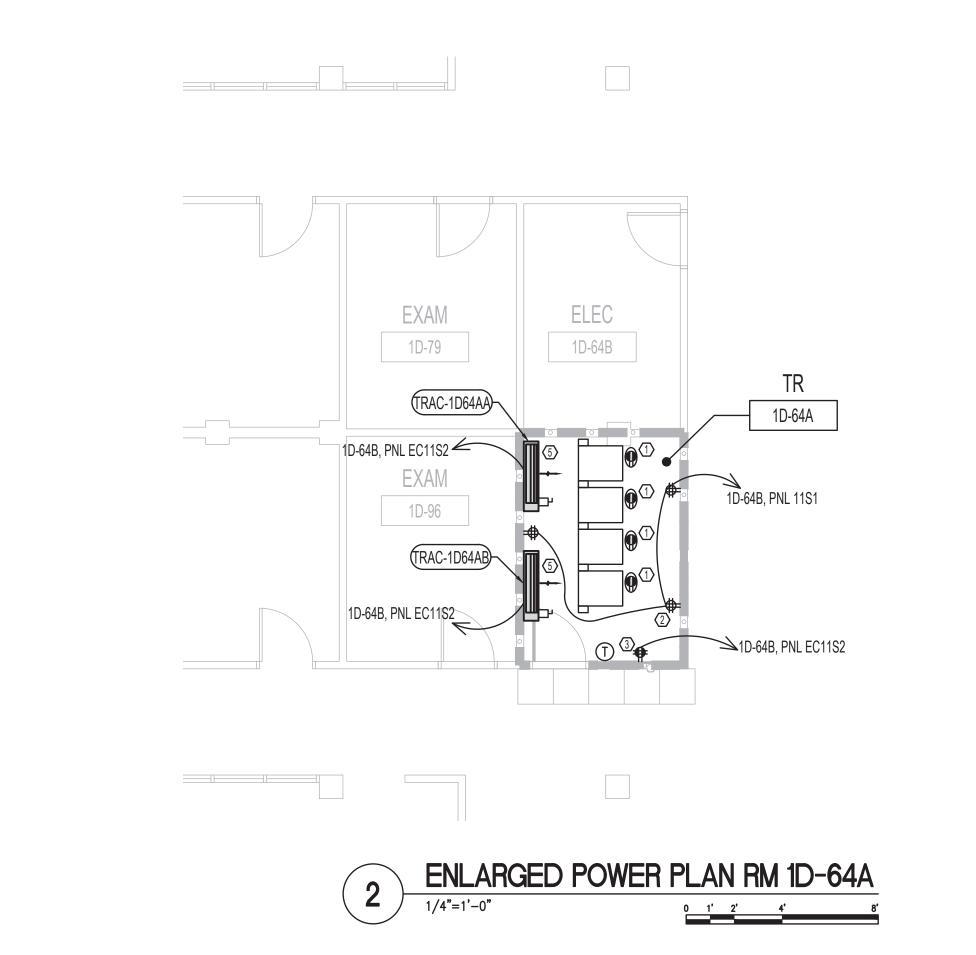
## ☑ ELECTRICAL

- 1. UPS POWER TO RACKS.
- 2. NORMAL POWER TO ROOM RECEPTACLES, AN INSTALLING LIGHTING TO DETERMINE OPTIMU
- 3. EMERGENCY POWER TO ROOM RECEPTACLES
   INSTALLING LIGHTING TO DETERMINE OPTIMI
   OCCUPANCY SENSOR, HICH MOUNT
- 4. OCCUPANCY SENSOR HIGH MOUNT.
- 5. ONLY BRANCH CIRCUIT IS SHOWN FROM POW CONDUIT AND WIRE PER DETAIL ON DRAWING MECHANICAL CONTRACTOR TO ROUTE POWE



of	Drawing Title ELETRICAL - BUILDING 1-9-46 - ENLARGED PLANS - FIRST FLOOR			Phase ISSUE FOR BID	Project Title EHRM INFR/ UPGRADES	ASTRUCTU
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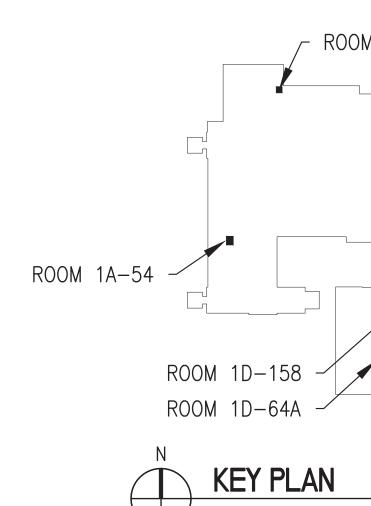


## ELECTRICAL GE

- A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WIRI C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED, MOVED TO NEW TR ROOM. "BIOENGINEERIN CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINA
- D. PROTECT IT EQUIPMENT FROM DUST, DURING E. SEE PANEL SCHEDULES ON DRAWING SERIES E CIRCUIT NUMBERS.
- F. NORMAL AND EMERGENCY WIRING TO TR RO THE SAME BUILDING AS THE TR. NOTATION FO CIRCUIT). CONTRACTOR TO INSTALL NEW 20A
- G. SEE DRAWING SERIES E700 FOR SINGLE LINE I H. NOTE THAT KEY NOTES MAINLY APPLY TO NEV
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- K. INSTALL LIGHTING CONTROLS PER LIGHTING E
- L. PANEL CIRCUITS ARE SUGGESTIONS. CONTRA BASED ON FIELD CONDITIONS DURING WIRIN

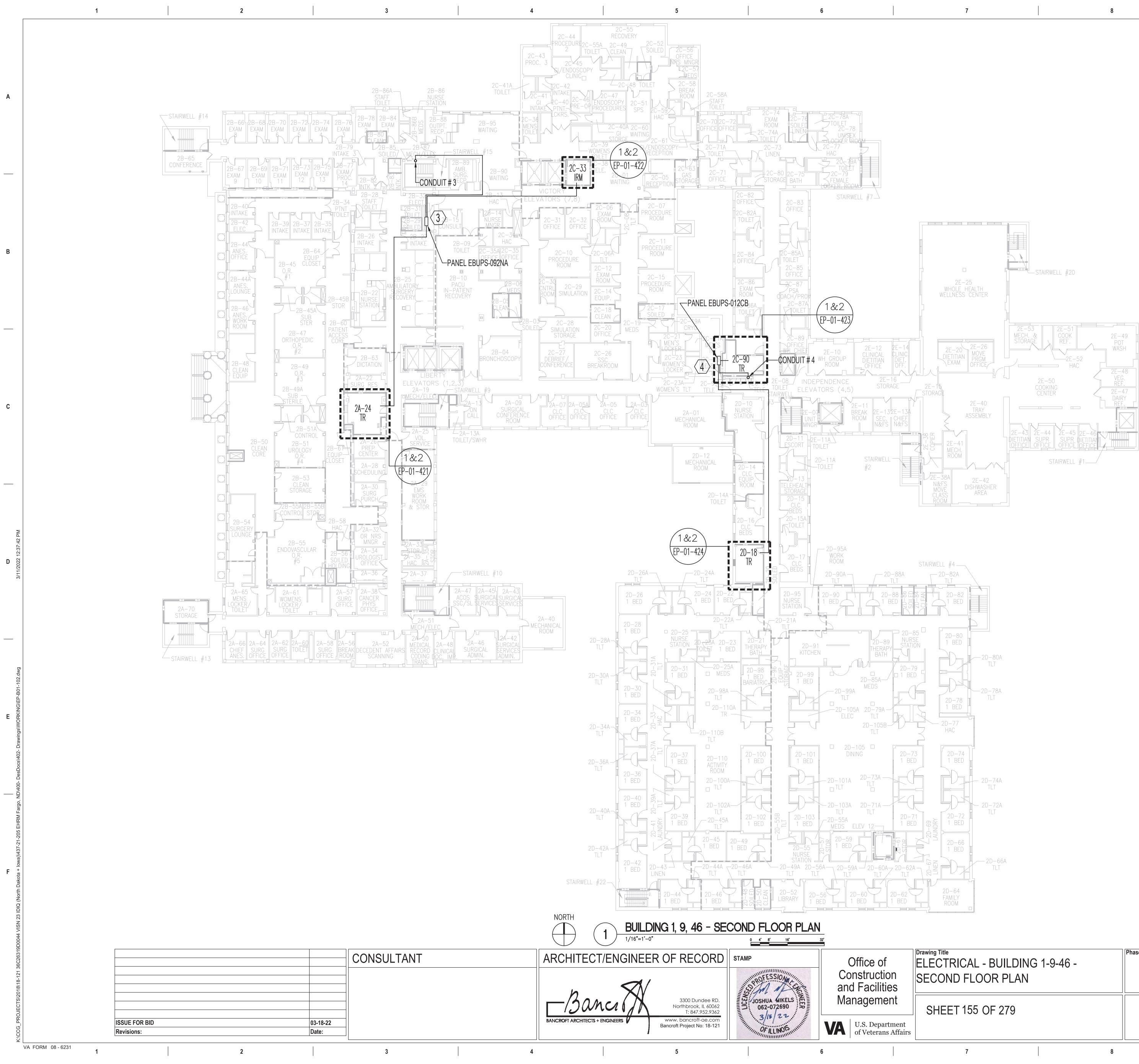
## ELECTRICAL $\langle X \rangle$

- 1. UPS POWER TO RACKS.
- 2. NORMAL POWER TO ROOM RECEPTACLES, A INSTALLING LIGHTING TO DETERMINE OPTIMU
- 3. EMERGENCY POWER TO ROOM RECEPTACLES INSTALLING LIGHTING TO DETERMINE OPTIMU
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## ELECTRICAL GENERAL NOTES

A. CONTRACTOR TO DETERMINE DETAILED CONDUIT ROUTING BASED ON FIELD CONDITIONS. B. NORMAL POWER TO WALL OUTLETS AND LIGHTS IS ROUTED FROM ELECTRIC CLOSET THAT IS IN BASED ON FIELD CONDITIONS. THIS CONDUIT IS NOT SHOWN ON DRAWINGS.

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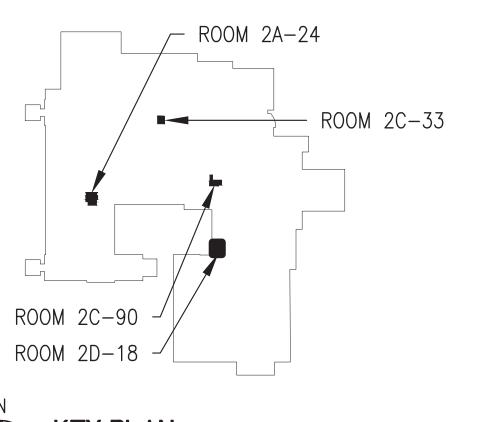
- FROM NORMAL POWER. D. EQUIPMENT POWER TO TECHNOLOGY ROOM FANS AND CONDENSERS IS FROM EQUIPMENT
- POWER. CONTRACTOR TO REFER TO DETAIL ON DRAWING E501 TO WIRE AC UNITS PER MECHANICAL SCHEDULE AND WIRE SIZING PER DRAWING E001
- E. CONTACT VA IT PRIOR TO WORKING IN IT CLOSET. F. FOLLOW VA LOCK OUT TAG OUT PROCEDURES FOR SAFETY.
- G. SEE PANEL SCHEDULES ON DRAWING SERIES E600 FOR PANEL SCHEDULES AND CIRCUIT NUMBERS. H. SEE DRAWING SERIES E700 FOR SINGLE LINE DRAWINGS.
- I. NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS
- NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL. J. UPS POWER TO RACKS / CABINETS IN NEW TR'S MUST BE PROVIDED TO THE TOP OF THE RACKS
- / CABINETS. NO POWER WIRING ON FLOORS! K. RECEPTACLES ABOVE RACKS MUST BE NEMA L21-30R, LOCKING RECEPTACLE.

## INSTALL LIGHTING FIXTURES PER LIGHTING SCHEDULE. CONTACT COR PRIOR TO

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- INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.
- ROUTE FEEDER CONDUIT #3 FROM CHASE NEAR 2B-37 TO ELECTRIC CLOSET 2B-32 AND INSTALL NEW PANEL EBUPS012CB. CONTRACTOR TO LOCATE NEW PANEL BASED ON FIELD CONDITIONS. SUGGEST INSTALLING OPPOSITE OF PANEL EC462N1. ONLY 3 FT CLEARANCE REQUIRED IN FRONT OF 208V PANEL.
- 4. ROUTE FEEDER CONDUIT #4 FROM CHASE NEAR 2C-91, TO ELECTRIC CLOSET 2C-25 AND INSTALL NEW PANEL EBUPS012CB. CONTRACTOR TO LOCATE NEW PANEL BASED ON FIELD CONDITIONS.

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# **KEY PLAN**

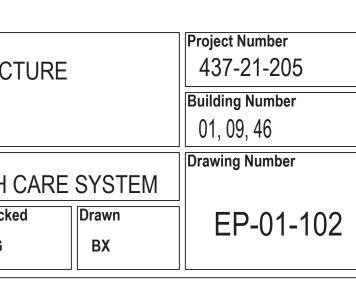
THE SAME BUILDING AS THE LOCATION OF THE TR. CONTRACTOR TO SELECT OPTIMAL ROUTING

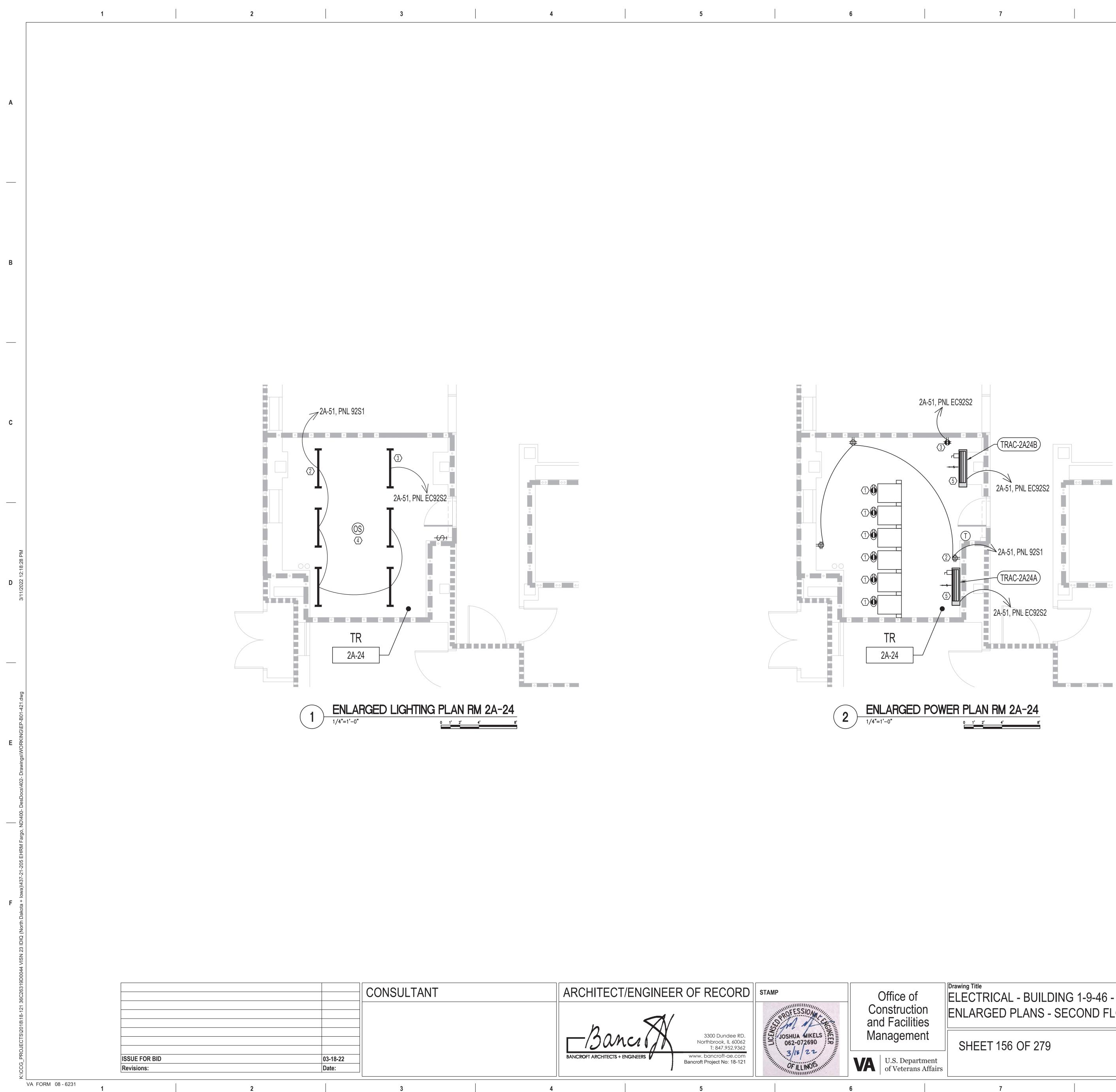
C. UPS POWER IS ON THE EMERGENCY CRITICAL BRANCH AND MUST BE IN SEPARATE CONDUITS

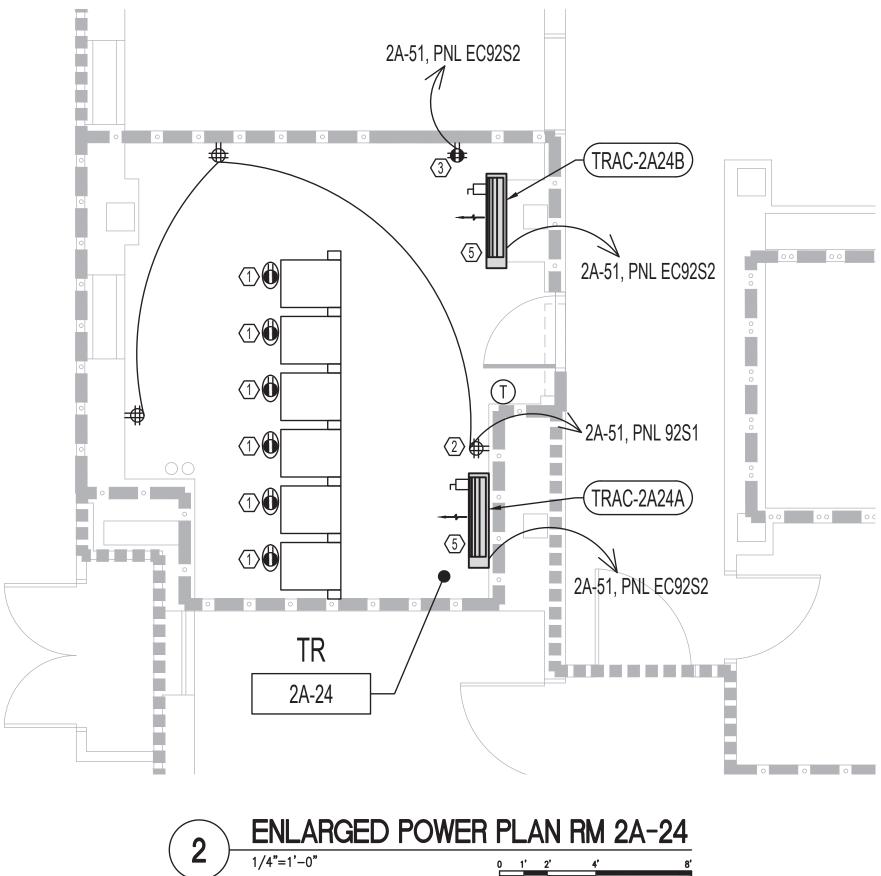
BRANCH OF EMERGENCY POWER AND MUST BE IN CONDUITS SEPARATE FROM NORMAL

## ELECTRICAL KEY NOTES

2. INSTALL LIGHTING CONTROLS PER nLIGHT DETAIL DRAWING E501.







## ELECTRICAL G

- A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WIR C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED MOVED TO NEW TR ROOM. "BIOENGINEERI CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGIN D. PROTECT IT EQUIPMENT FROM DUST, DURIN
- E. SEE PANEL SCHEDULES ON DRAWING SERIES CIRCUIT NUMBERS.
- F. NORMAL AND EMERGENCY WIRING TO TR R SAME BUILDING AS THE TR. NOTATION FOR CONTRACTOR TO INSTALL NEW 20A BREAKER
- G. SEE DRAWING SERIES E700 FOR SINGLE LINE H. NOTE THAT KEY NOTES MAINLY APPLY TO NE IS NOT REQUIRED IN EXISTING IT CLOSETS TH
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- J. RECEPTACLES ABOVE RACKS MUST BE NEMA
- K. INSTALL LIGHTING CONTROLS PER LIGHTING
- L. PANEL CIRCUITS ARE SUGGESTIONS. CONTRA ON FIELD CONDITIONS DURING WIRING.

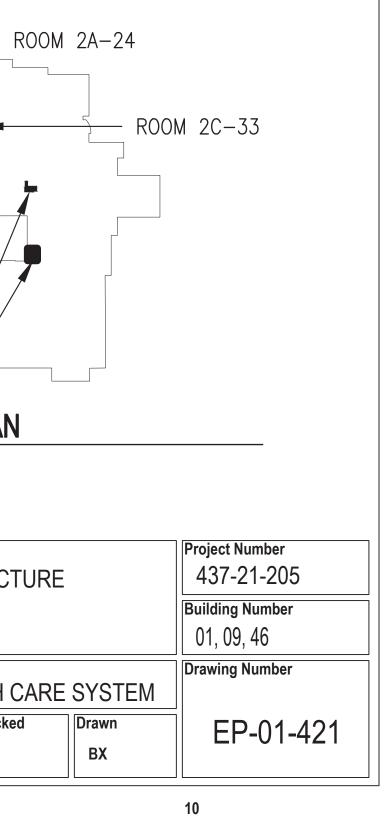
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- INSTALLING LIGHTING TO DETERMINE OPTIM 3. EMERGENCY POWER TO ROOM RECEPTACLE
- INSTALLING LIGHTING TO DETERMINE OPTIM 4. OCCUPANCY SENSOR - HIGH MOUNT.
- 5. ONLY BRANCH CIRCUIT IS SHOWN FROM PO CONDUIT AND WIRE PER DETAIL ON DRAWIN MECHANICAL CONTRACTOR TO ROUTE POWE

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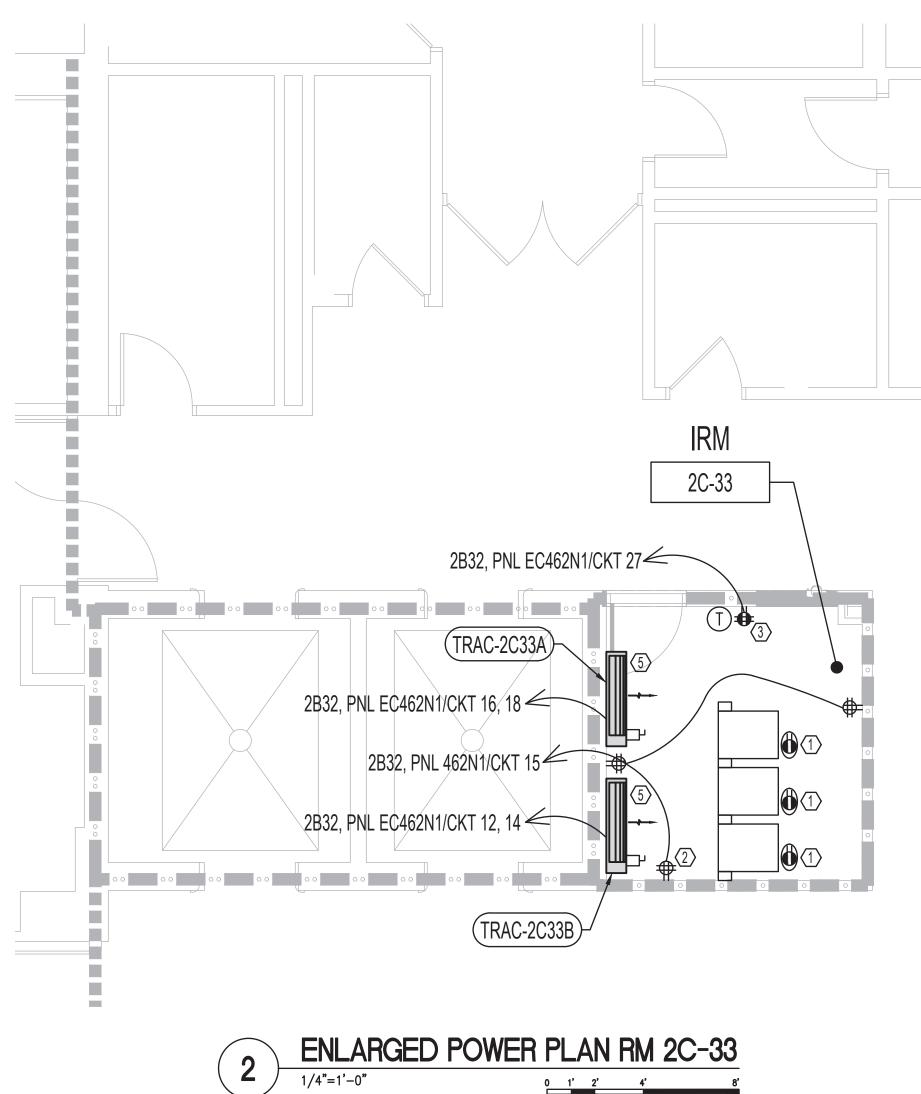
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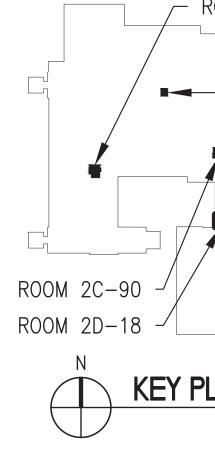
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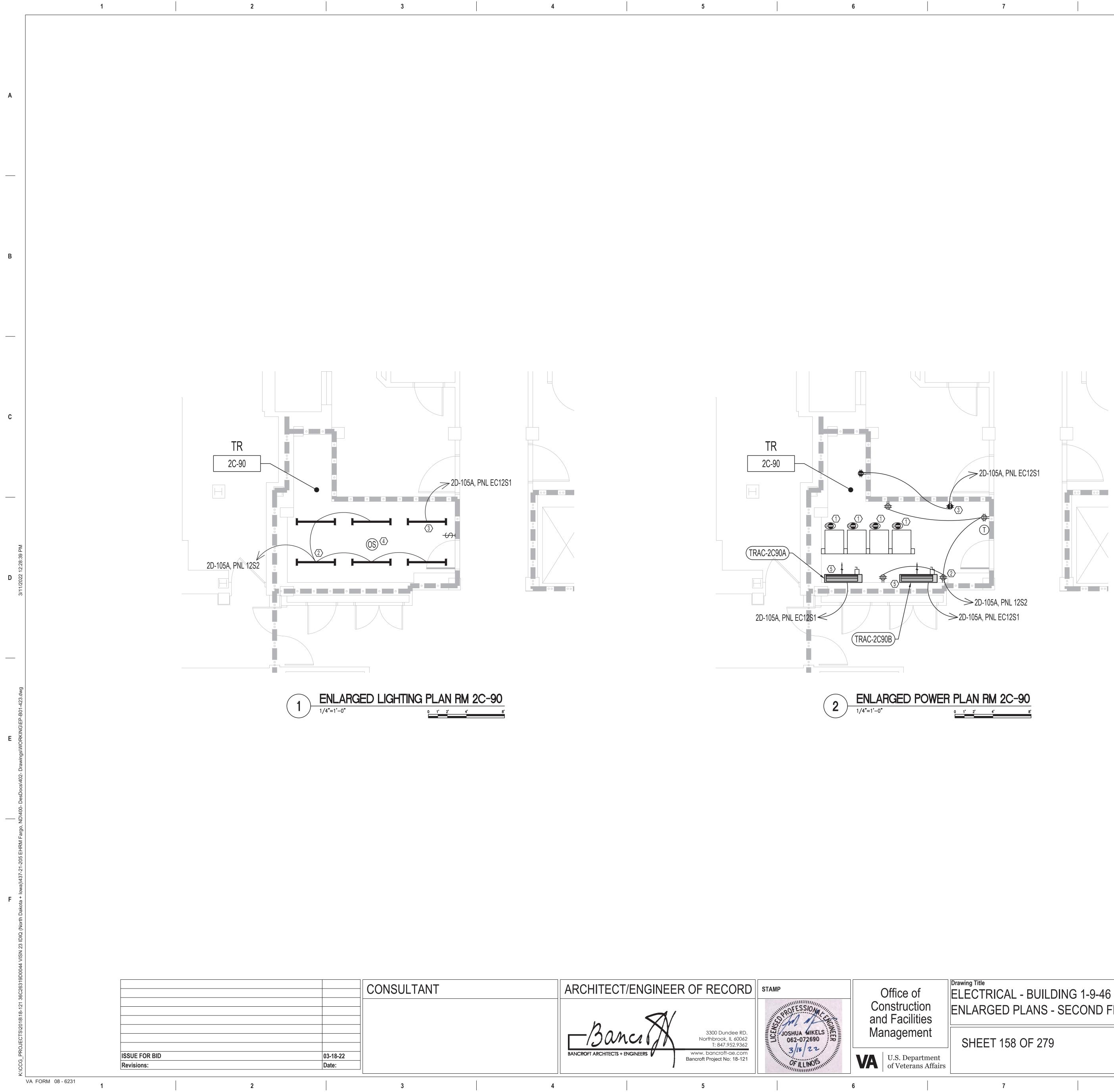


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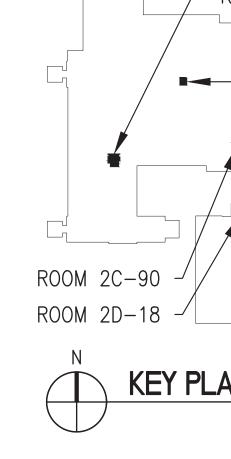


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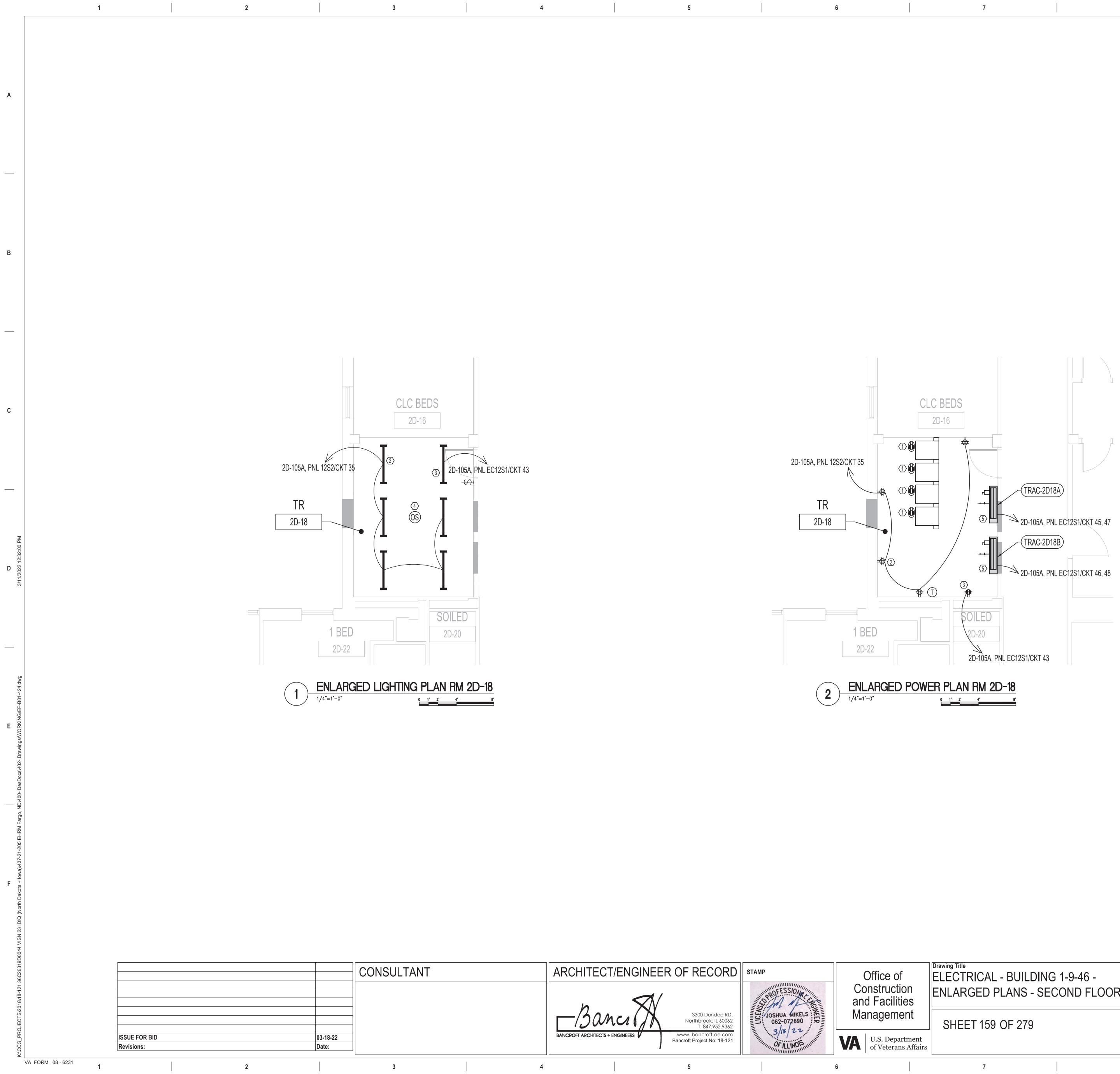
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- f!	Drawing Title ELECTRICAL - BUILDIN ENLARGED PLANS - SE	Phase ISSUE FC	OR BID	Project Title EHRM INFRASTRUCTURE UPGRADES			
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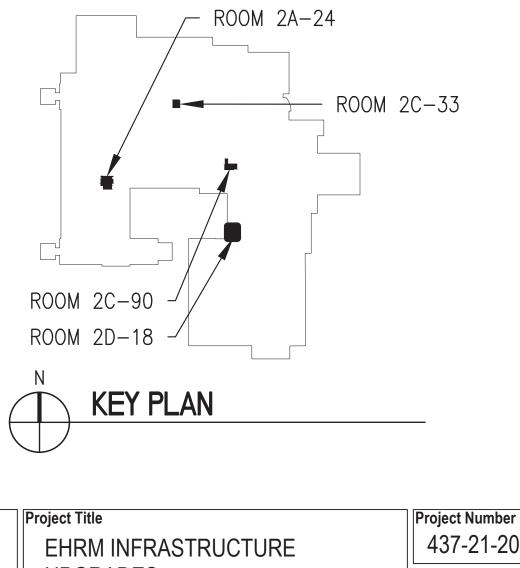
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- A. CONTACT VA IT PRIOR TO WORKING IN DATA O
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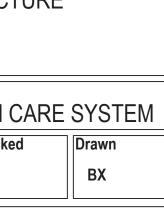
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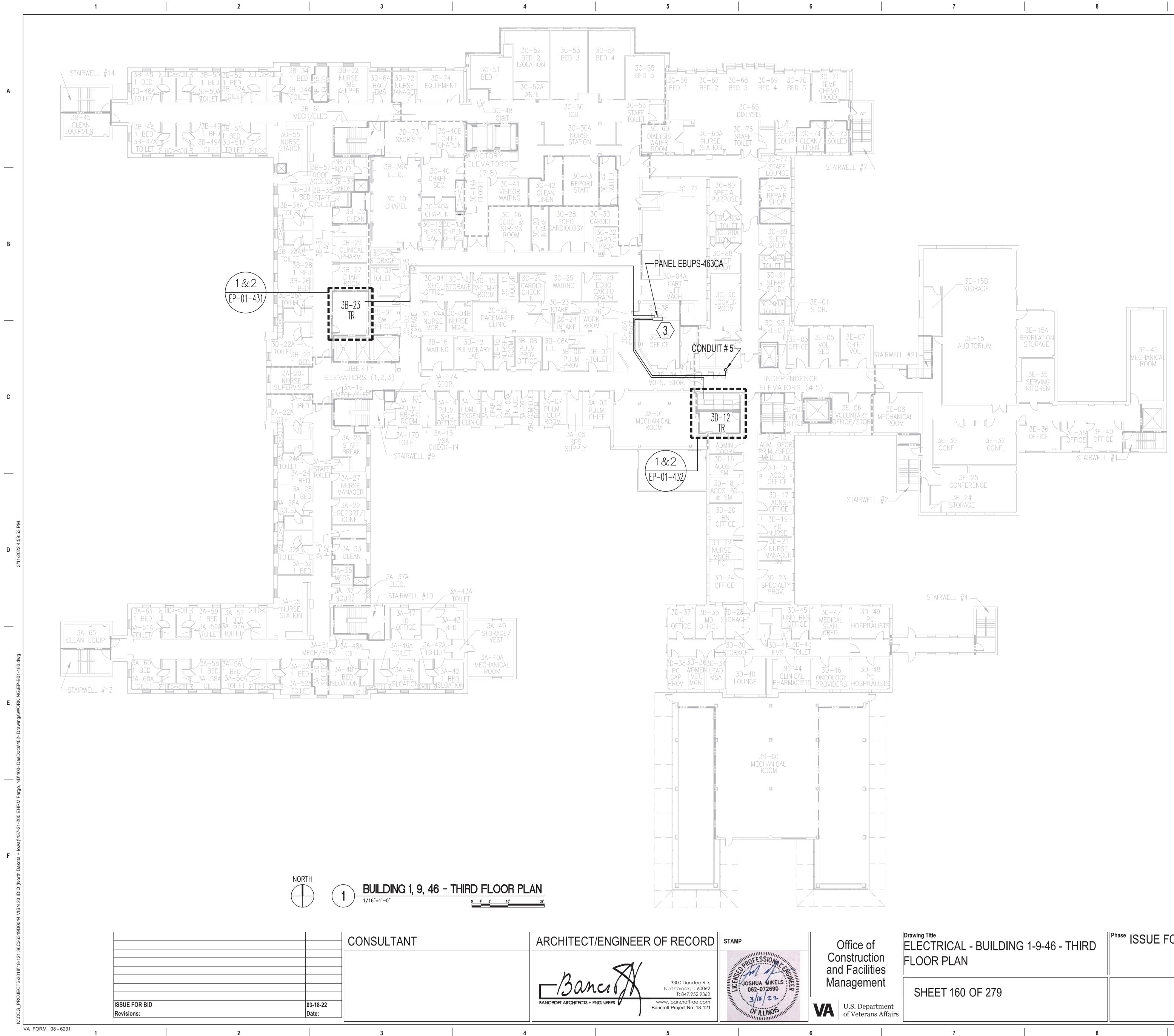
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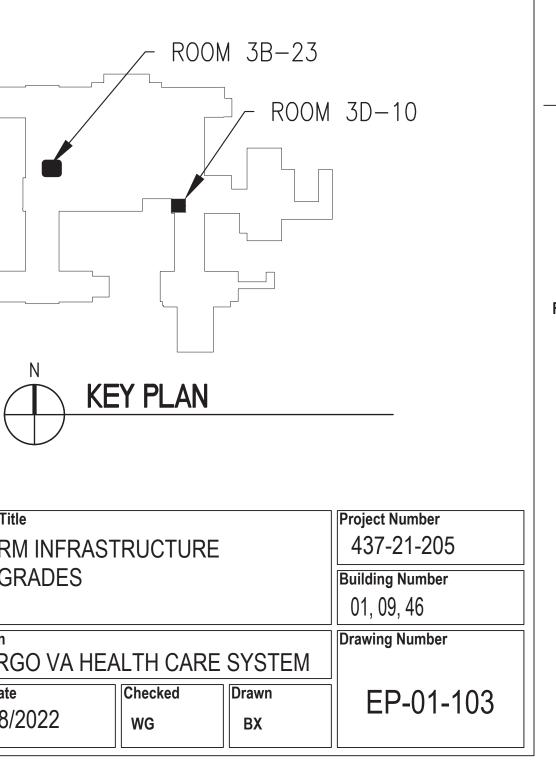


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- A. CONTRACTOR TO DETERMINE DETAILED CON B. NORMAL POWER TO WALL OUTLETS AND LIG IN THE SAME BUILDING AS THE LOCATION OF ROUTING BASED ON FIELD CONDITIONS. THIS THIS ROUTING IS DIFFERENT, IT WILL BE NOT
- C. UPS POWER IS ON THE EMERGENCY CRITICAL CONDUITS FROM NORMAL POWER. D. EQUIPMENT POWER TO TECHNOLOGY ROOM
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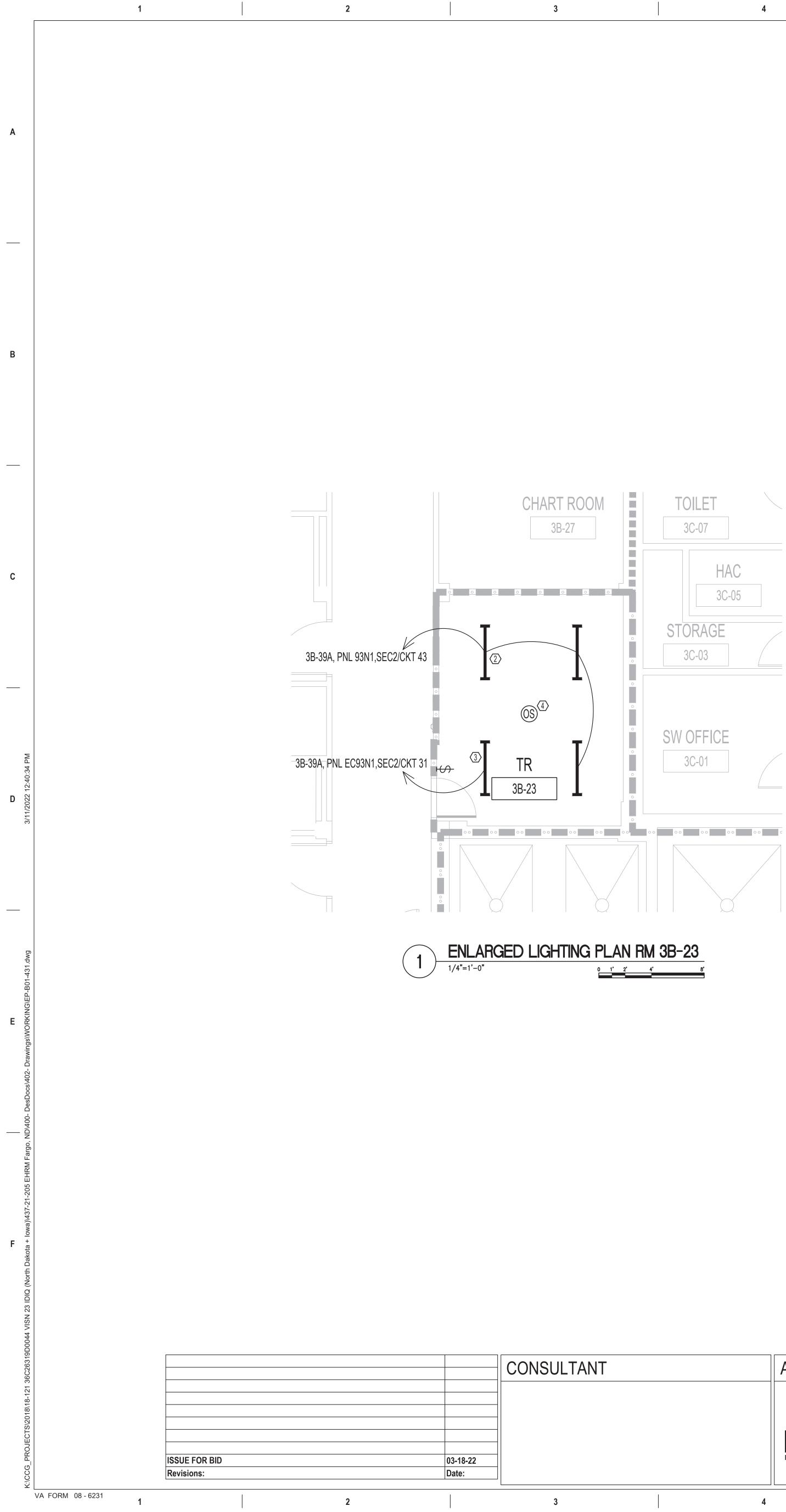
#### ELECTRICAL KEY NOTES $\langle X \rangle$

- 1. INSTALL LIGHTING FIXTURES PER LIGHTING SCHEDULE. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.
- INSTALL LIGHTING CONTROLS PER NLIGHT DRAWING DETAIL ON DRAWING E501.
- ROUTE FEEDER CONDUIT #5 (DRAWING EP-01-10B) FROM CHASE ACROSS FROM STAIRWAY AND ROUTE TO ELECTRIC CLOSET 3C-38 AND INSTALL NEW PANEL UPS 3A, ON EAST END OF SOUTH WALL REMOVE THE NAC PANEL THAT IS NOT WIRED.

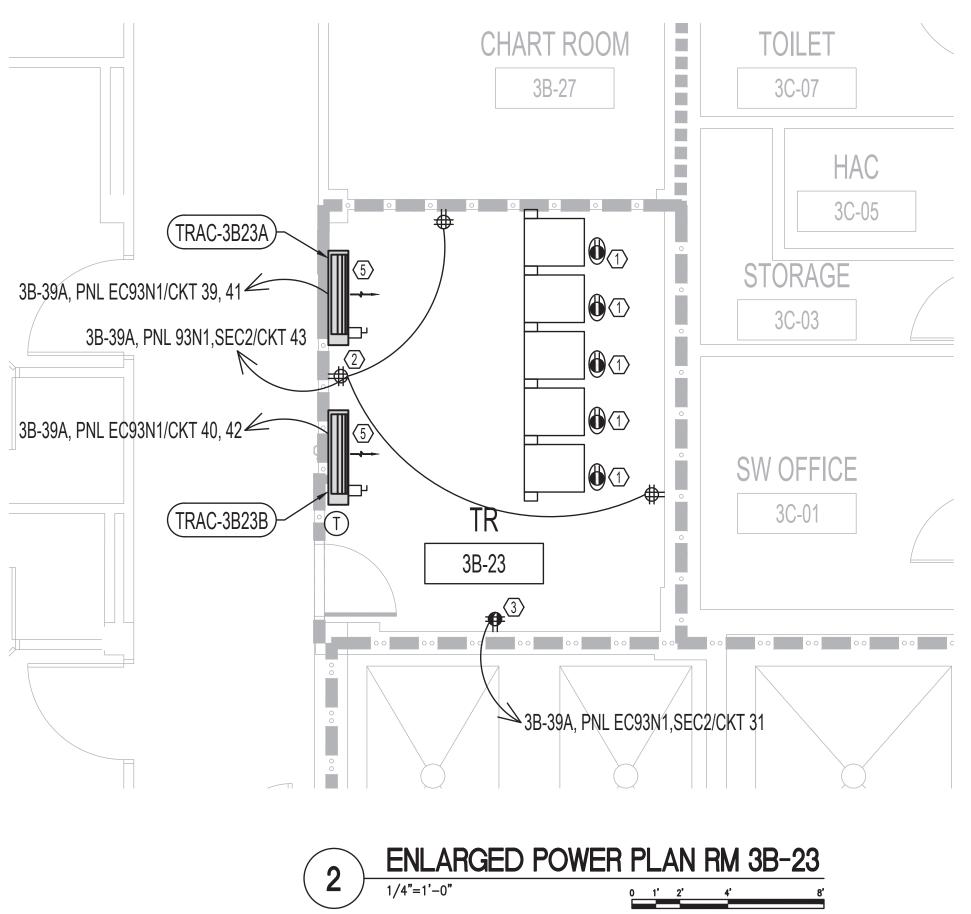


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## ELECTRICAL GEN

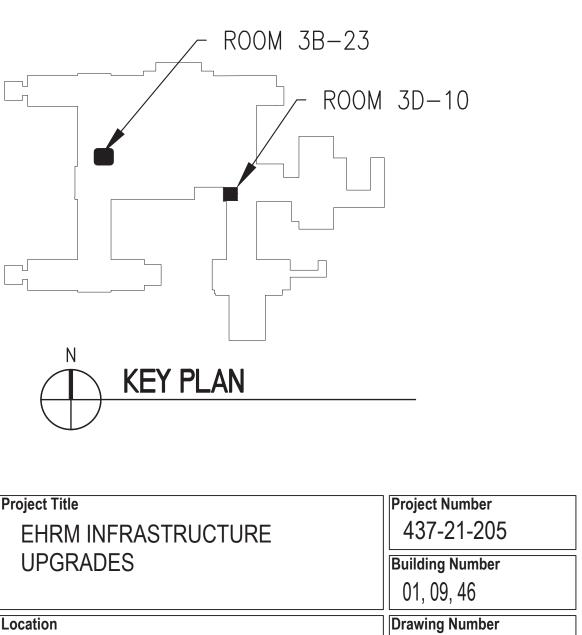
- A. CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET. B. USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT. C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED, IT COMMUNICATIONS EQUIPMENT WILL BE MOVED TO NEW TR ROOM. "BIOENGINEERING" TYPE EQUIPMENT; I.E. SECURITY, NURSE
- D. PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST. E. SEE PANEL SCHEDULES ON DRAWING SERIES E600 FOR UPS PANEL SCHEDULES AND UPS CIRCUIT NUMBERS.
- F. NORMAL AND EMERGENCY WIRING TO TR ROOM LIGHTS AND RECEPTACLES IS SHOWN IN THE SAME BUILDING AS THE TR. NOTATION FOR EACH CIRCUIT IS (ROOM, PANEL AND
- G. SEE DRAWING SERIES E700 FOR SINGLE LINE DRAWINGS.
- IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL.
- I. UPS POWER TO RACKS / CABINETS IN NEW TR'S MUST BE PROVIDED TO THE TOP OF THE RACKS / CABINETS. NO POWER WIRING ON FLOORS!
- J. RECEPTACLES ABOVE RACKS MUST BE NEMA L21-30R, LOCKING RECEPTACLES.
- K. INSTALL LIGHTING CONTROLS PER LIGHTING DETAIL ON DETAIL DRAWING E501.

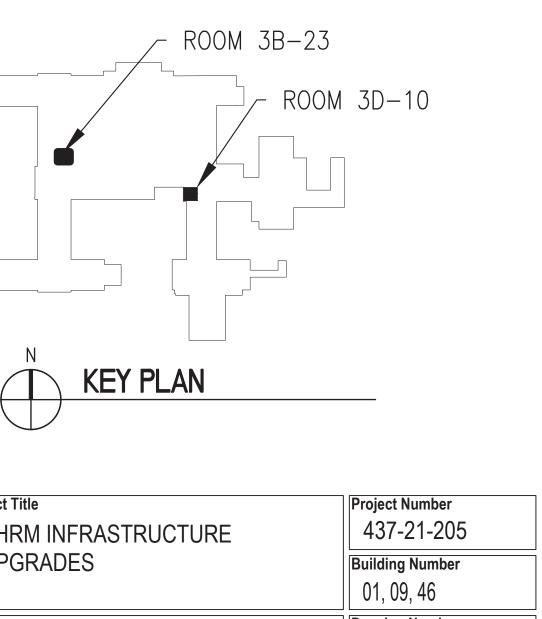
#### ELECTRICAL KEY NOTES $\langle X \rangle$

- 1. UPS POWER TO RACKS.
- 2. NORMAL POWER TO ROOM RECEPTACLES, AND LIGHTS. CONTACT COR PRIOR TO
- INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES. 4. OCCUPANCY SENSOR - HIGH MOUNT.
- 5. ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT. INSTALL CONDUIT AND WIRE PER DETAIL ON DRAWING E501. CONTRACTOR TO WORK WITH

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of	Drawing Title ELECTRICAL - BUILDING 1-9-46 - ENLARGED PLANS - THIRD FLOOR	Phase ISSUE FOR BID	Project Title EHRM INFRASTRUCTURE UPGRADES		
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IERAL	NOTES

CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINAL CLOSET, AND MUST REMAIN OPERATIONAL.

CIRCUIT). CONTRACTOR TO INSTALL NEW 20A BREAKERS AND UPDATE PANEL CIRCUIT INDEX.

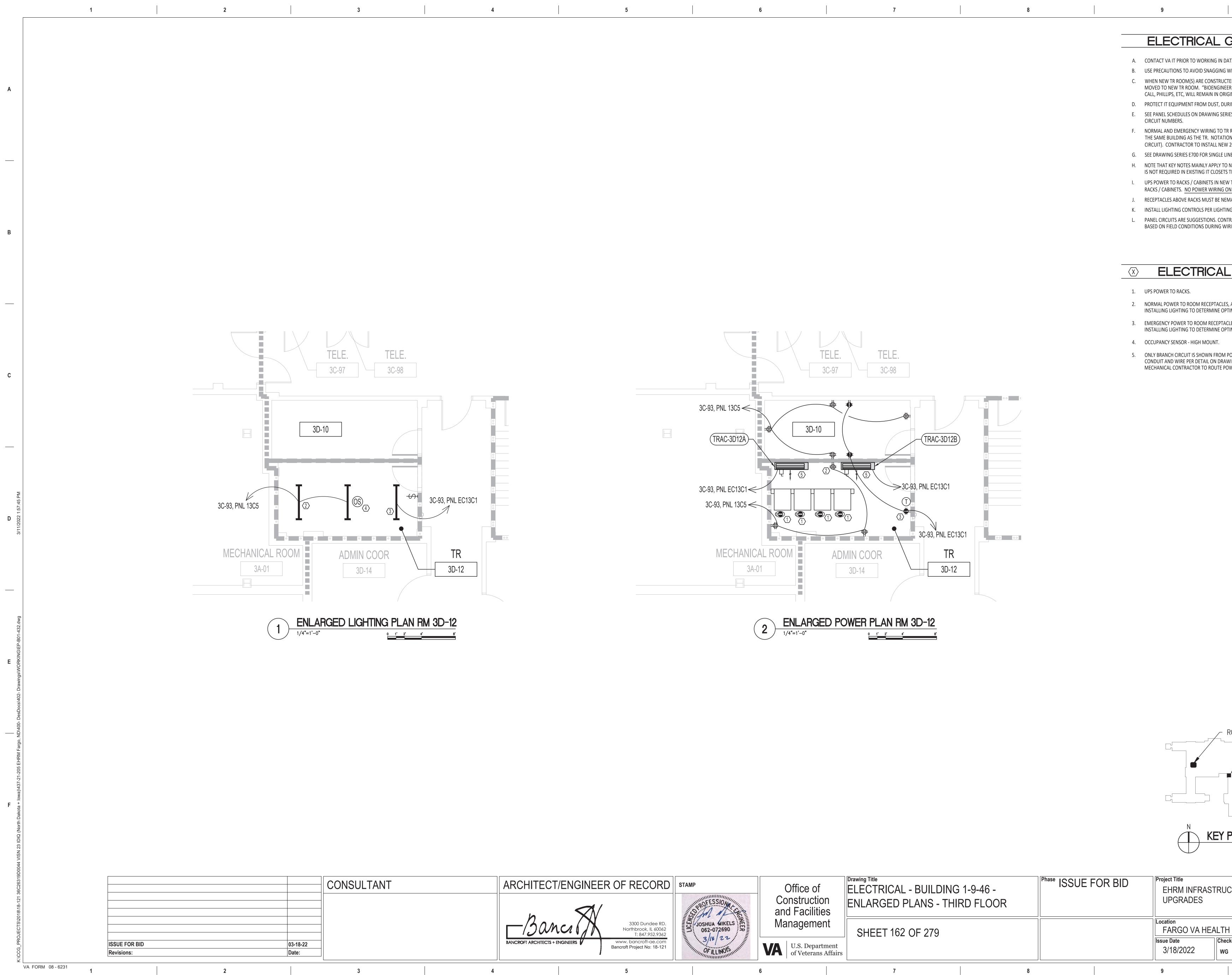
H. NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK

INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES. 3. EMERGENCY POWER TO ROOM RECEPTACLES AND LIGHTS. CONTACT COR PRIOR TO

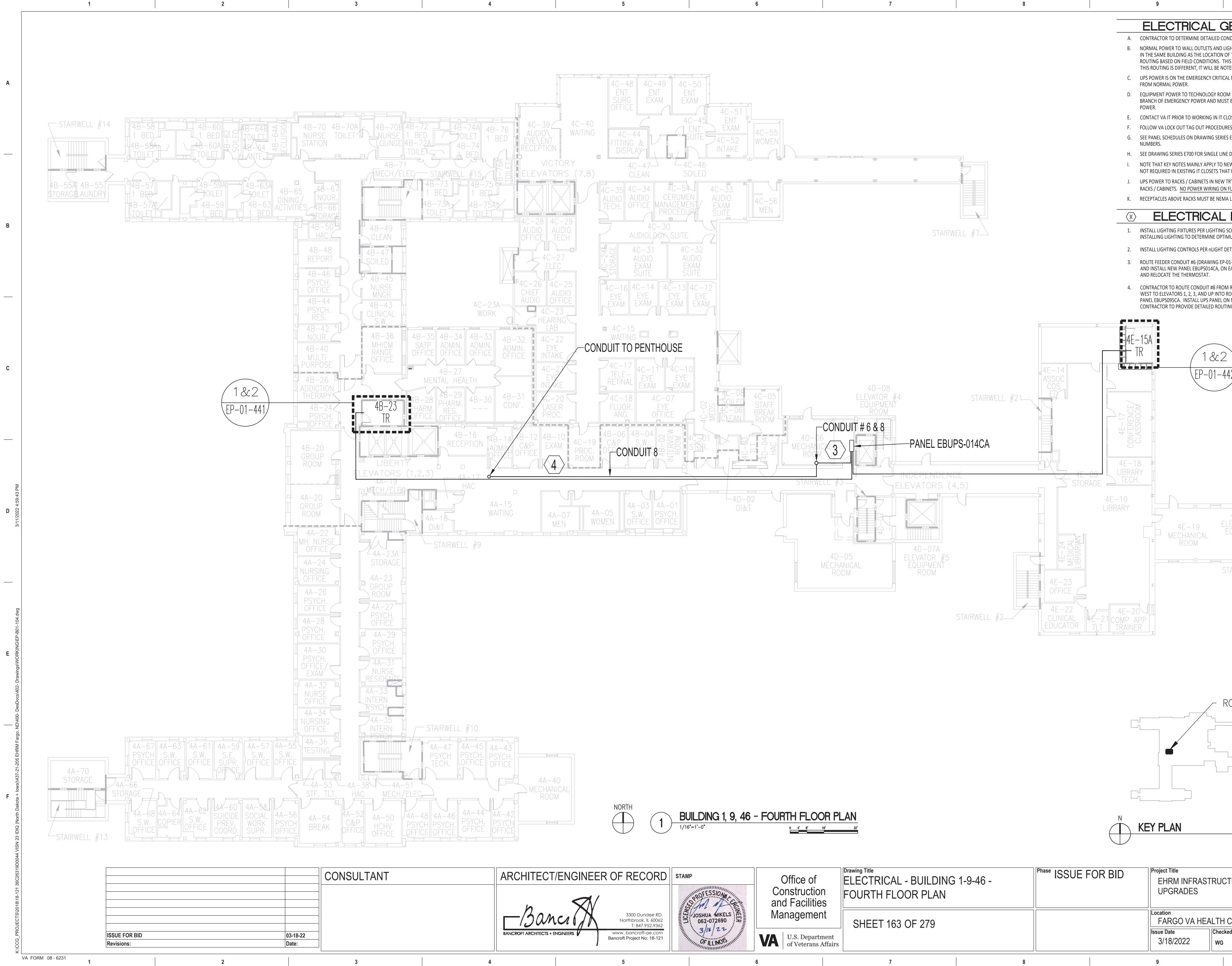
MECHANICAL CONTRACTOR TO ROUTE POWER AND TUBING TO OUTDOOR UNIT.

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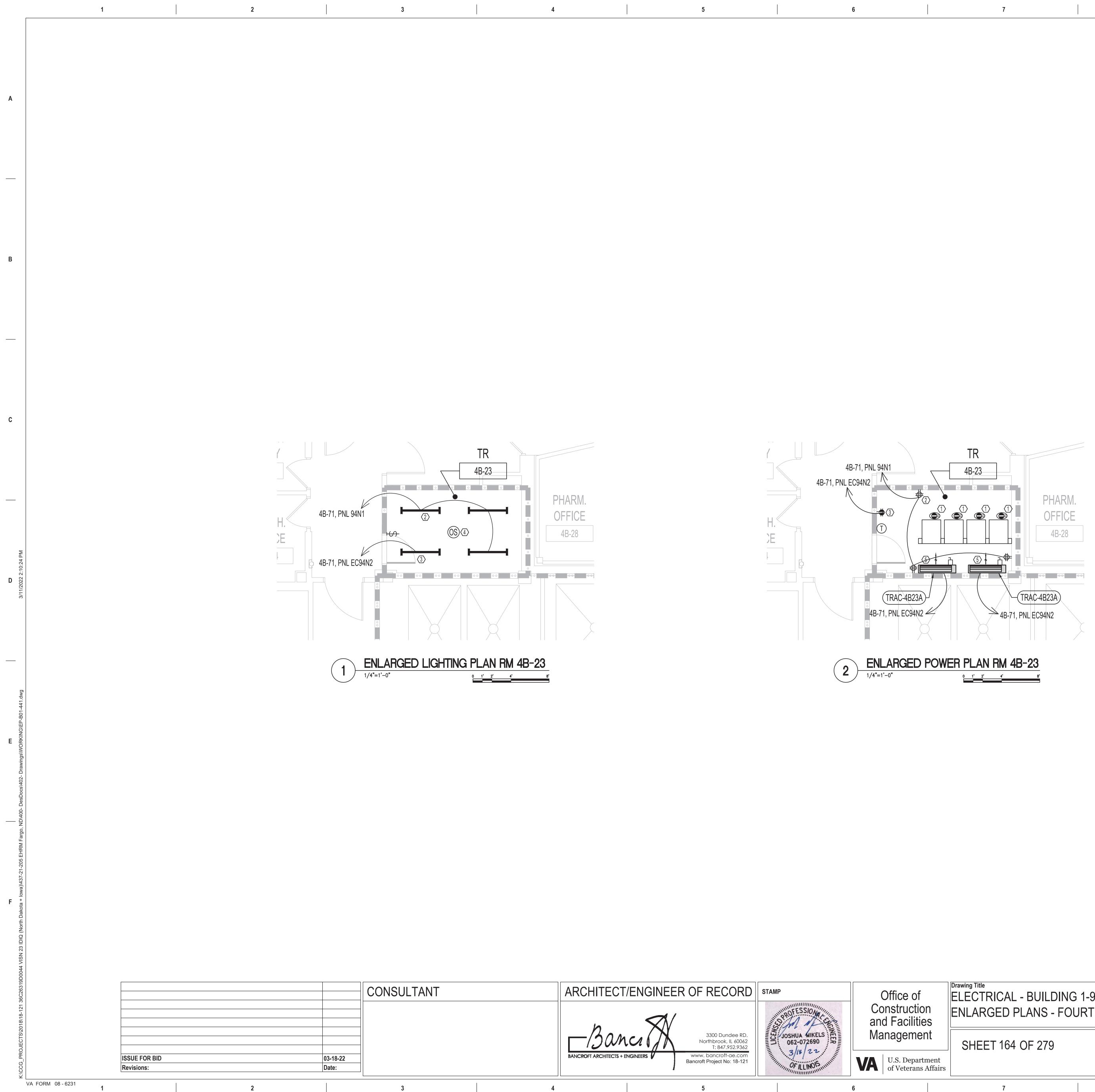
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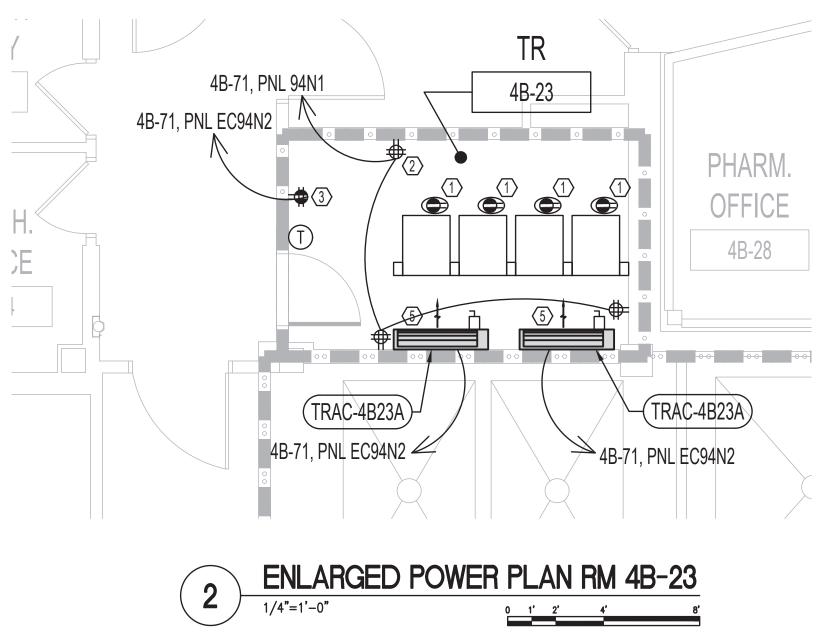


	ELECTRICAL GENERAL NOTES
	<ul> <li>ELECCTRICAL GENERAL NOTES</li> <li>CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET.</li> <li>USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT.</li> <li>WHEN NEW TR ROOM(S) ARE CONSTRUCTED, IT COMMUNICATIONS EQUIPMENT WILL BE MOVED TO NEW TR ROOM. "BIOENGINEERING" TYPE EQUIPMENT; I.E. SECURITY, NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINAL CLOSET, AND MUST REMAIN OPERATIONAL.</li> <li>PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST.</li> <li>SEE PANEL SCHEDULES ON DRAWING SERIES E600 FOR UPS PANEL SCHEDULES AND UPS CIRCUIT NUMBERS.</li> <li>NORMAL AND EMERGENCY WIRING TO TR ROOM LIGHTS AND RECEPTACLES IS SHOWN IN THE SAME BUILDING AS THE TR. NOTATION FOR EACH CIRCUIT IS (ROOM, PANEL AND CIRCUIT). CONTRACTOR TO INSTALL NEW 20A BREAKERS AND UPDATE PANEL CIRCUIT INDEX.</li> <li>SEE DRAWING SERIES E700 FOR SINGLE LINE DRAWINGS.</li> <li>NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL.</li> <li>UPS POWER TO RACKS / CABINETS IN NEW TR'S MUST BE PROVIDED TO THE TOP OF THE RACKS / CABINETS. <u>NO POWER WIRING ON FLOORSI</u></li> <li>RECEPTACLES ABOVE RACKS MUST BE NEMA L21-30R, LOCKING RECEPTACLES.</li> <li>INSTALL LIGHTING CONTROLS PER LIGHTING DETAIL ON DETAIL DRAWING E501.</li> <li>PANEL CIRCUITS ARE SUGGESTIONS. CONTRACTOR TO SELECT CIRCUITS AND BREAKERS BASED ON FIELD CONDITIONS DURING WIRING.</li> </ul>
	ELECTRICAL KEY NOTES
	1. UPS POWER TO RACKS.
	<ol> <li>NORMAL POWER TO ROOM RECEPTACLES, AND LIGHTS. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.</li> <li>EMERGENCY POWER TO ROOM RECEPTACLES AND LIGHTS. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.</li> <li>OCCUPANCY SENSOR - HIGH MOUNT.</li> </ol>
E. TELE. 7 3C-98	5. ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT. INSTALL CONDUIT AND WIRE PER DETAIL ON DRAWING E501. CONTRACTOR TO WORK WITH MECHANICAL CONTRACTOR TO ROUTE POWER AND TUBING TO OUTDOOR UNIT.
TRAC-3D12B TRAC-3D12B 3C-93, PNL EC13C1 3C-93, PNL EC13C1 TRAC-3D12 CONTRAC-3D-12 CONTRAC-3D12 CONTRAC-3D-12 CONTRAC-3D12 CONTRAC-3D-12 CONTRAC-3D	
POWER PLAN RM 3D-12 <u>1 2' 4' 8'</u>	
<u>POWER PLAN RM 3D-12</u>	
	ROOM 3B-23 ROOM 3D-10 ROOM 3D-10 KEY PLAN
<u>prawing Title</u> ELECTRICAL - BUILDING 1-9-46 -	E FOR BID
<u>prawing Title</u>	E FOR BID



<b>EVERAL NOTES</b> NDUIT ROUTING BASED ON FIELD CONDITIONS. GHTS IS ROUTED FROM ELECTRIC CLOSET THAT IS OF THE TR. CONTRACTOR TO SELECT OPTIMAL HIS CONDUIT IS NOT SHOWN ON DRAWINGS. IF TED ON THE KEY NOTES.	
AL BRANCH AND MUST BE IN SEPARATE CONDUITS M FANS AND CONDENSERS IS FROM EQUIPMENT T BE IN CONDUITS SEPARATE FROM NORMAL LOSET. RES FOR SAFETY. S E600 FOR PANEL SCHEDULES AND CIRCUIT	Α
E DRAWINGS. IEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS AT REMAIN OPERATIONAL. TR'S MUST BE PROVIDED TO THE TOP OF THE <u>FLOORS!</u> A L21-30R, LOCKING RECEPTACLE.	
KEY NOTES SCHEDULE. CONTACT COR PRIOR TO MUM LOCATION FOR LIGHT FIXTURES. DETAIL ON DRAWING E501. 01-10B) UP INTO MECHANICAL ROOM 4D-06	В
A ROOM 4D-06 INTO CORRIDOR HEADING ROOM 4D-06 INTO CORRIDOR HEADING ROOM PENTHOUSE A. CONTINUE CONDUIT TO N NORTH WALL, NEXT TO DOORWAY. ING BASED ON FIELD CONDITIONS.	
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4E-19A EVATOR #6 EQUIPMENT ROOM	D
	E
ROOM 4B-23 ROOM 4E-15A	
	F
TURE Project Number 437-21-205 Building Number 01, 09, 46 Drawing Number	
CARE SYSTEM ed Drawn BX EP-01-104	
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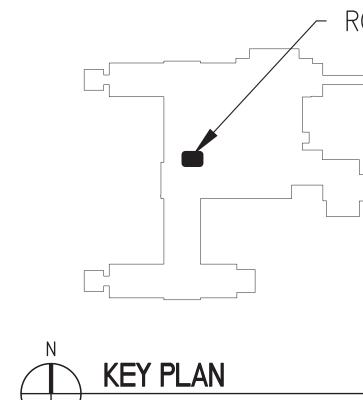
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## ELECTRICAL GE

- A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WIRI C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED,
- MOVED TO NEW TR ROOM. "BIOENGINEERIN CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINA D. PROTECT IT EQUIPMENT FROM DUST, DURING E. SEE PANEL SCHEDULES ON DRAWING SERIES E
- CIRCUIT NUMBERS. F. NORMAL AND EMERGENCY WIRING TO TR ROO
- THE SAME BUILDING AS THE TR. NOTATION FO CIRCUIT). CONTRACTOR TO INSTALL NEW 20A G. SEE DRAWING SERIES E700 FOR SINGLE LINE I
- H. NOTE THAT KEY NOTES MAINLY APPLY TO NEV IS NOT REQUIRED IN EXISTING IT CLOSETS THA
- I. CONTRACTOR TO ROUTE NEW CONDUIT #7 U (SEE DRAWING EP-01-10B), THEN ROUTE UP DRAWING EP-01-101) AND INSTALL NEW PANE TO LOCATE NEW UPS PANEL BASED ON FIELD REQUIREMENTS.
- J. UPS POWER TO RACKS / CABINETS IN NEW TR RACKS / CABINETS. NO POWER WIRING ON F
- K. RECEPTACLES ABOVE RACKS MUST BE NEMA I
- L. INSTALL LIGHTING CONTROLS PER LIGHTING E

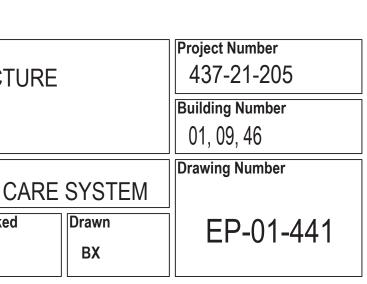
## ELECTRICAL

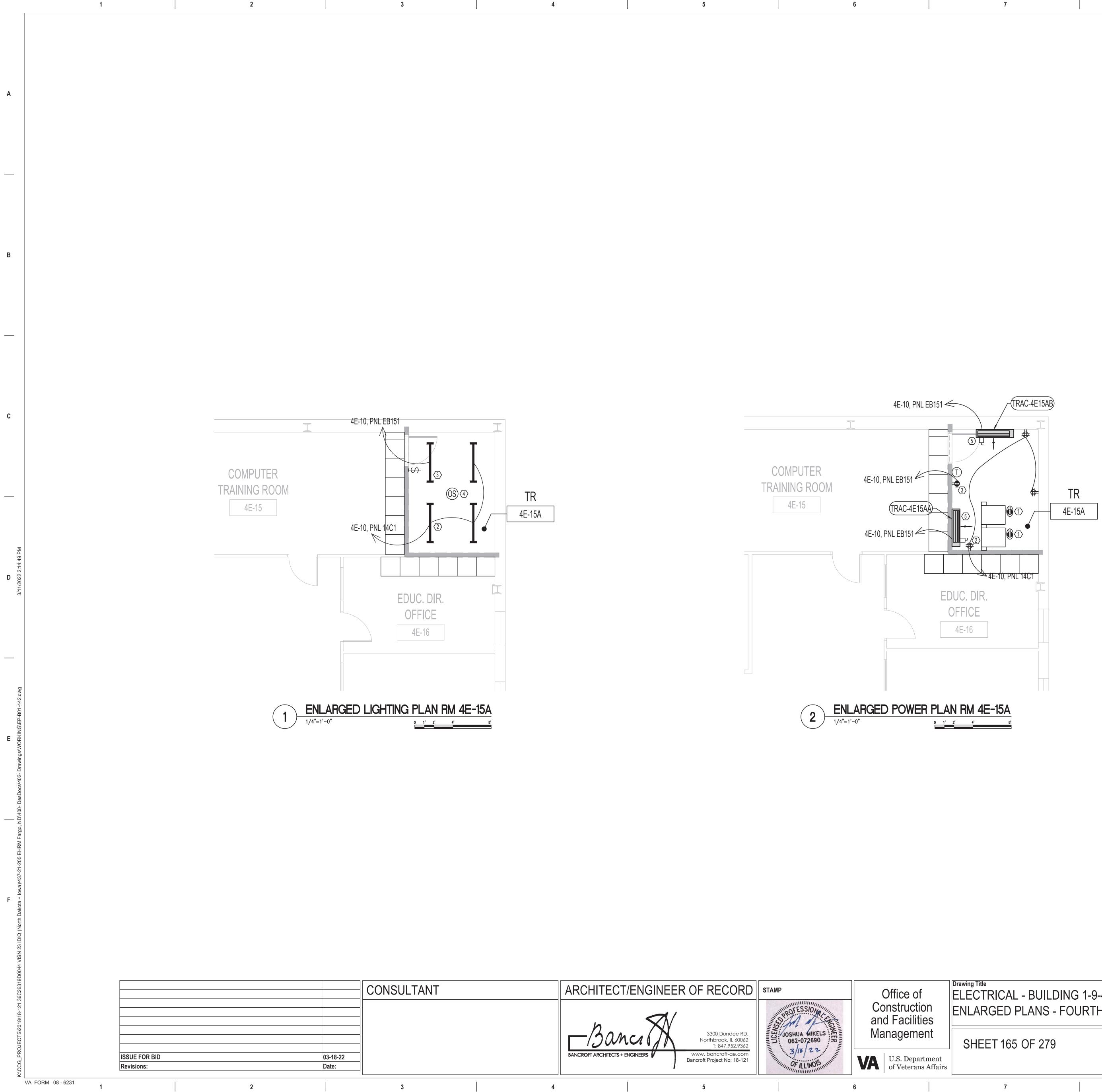
- 1. UPS POWER TO RACKS. ROUTE CONDUIT AND ROOM 102B.
- 2. NORMAL POWER TO ROOM RECEPTACLES, AN INSTALLING LIGHTING TO DETERMINE OPTIMU
- 3. EMERGENCY POWER TO ROOM RECEPTACLES INSTALLING LIGHTING TO DETERMINE OPTIMU 4. OCCUPANCY SENSOR - HIGH MOUNT.
- 5. ONLY BRANCH CIRCUIT IS SHOWN FROM POW CONTRACTOR TO WORK WITH MECHANICAL C TUBING TO OUTDOOR UNIT.



of	Drawing Title ELECTRICAL - BUILDING 1-9-46 - ENLARGED PLANS - FOURTH FLOOR			Phase ISSUE FOR BID	Project Title EHRM INFRASTRUCTU UPGRADES		
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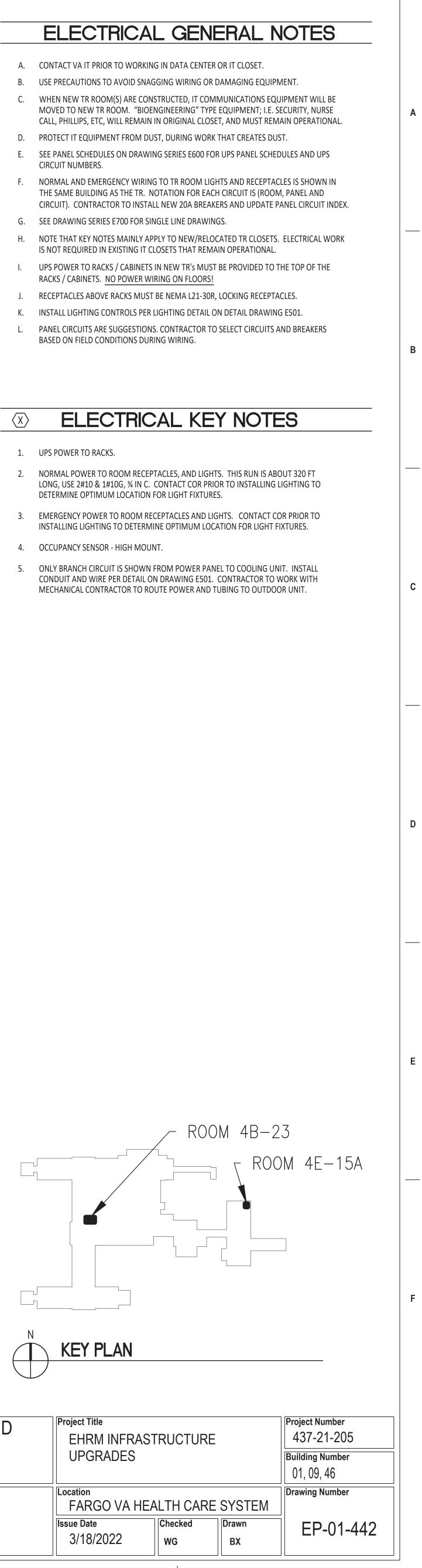
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ENERAL NOTES	
TA CENTER OR IT CLOSET. IRING OR DAMAGING EQUIPMENT. D, IT COMMUNICATIONS EQUIPMENT WILL BE ING" TYPE EQUIPMENT; I.E. SECURITY, NURSE NAL CLOSET, AND MUST REMAIN OPERATIONAL. NG WORK THAT CREATES DUST. S E600 FOR UPS PANEL SCHEDULES AND UPS	A
A FOR EACH CIRCUIT IS (ROOM, PANEL AND DOA BREAKERS AND UPDATE PANEL CIRCUIT INDEX. E DRAWINGS. IEW/RELOCATED TR CLOSETS. ELECTRICAL WORK HAT REMAIN OPERATIONAL. UPS POWER, FROM ROOM BC-50A IN BASEMENT P TO 1 <sup>ST</sup> FLOOR PASSAGE TO BLDG 40 (SEE ANEL UPS BLDG 40 IN ROOM 102B. CONTRACTOR LD CONDITIONS AND NEC 3 FT EXCLUSION TR'S MUST BE PROVIDED TO THE TOP OF THE FLOORS!	
A L21-30R, LOCKING RECEPTACLES. 6 DETAIL ON DETAIL DRAWING. KEY NOTES	В
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AND LIGHTS. CONTACT COR PRIOR TO MUM LOCATION FOR LIGHT FIXTURES. ES AND LIGHTS. CONTACT COR PRIOR TO MUM LOCATION FOR LIGHT FIXTURES. DWER PANEL TO COOLING UNIT, L CONTRACTOR TO ROUTE POWER AND	С
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ROOM 4B-23 ROOM 4E-15A	
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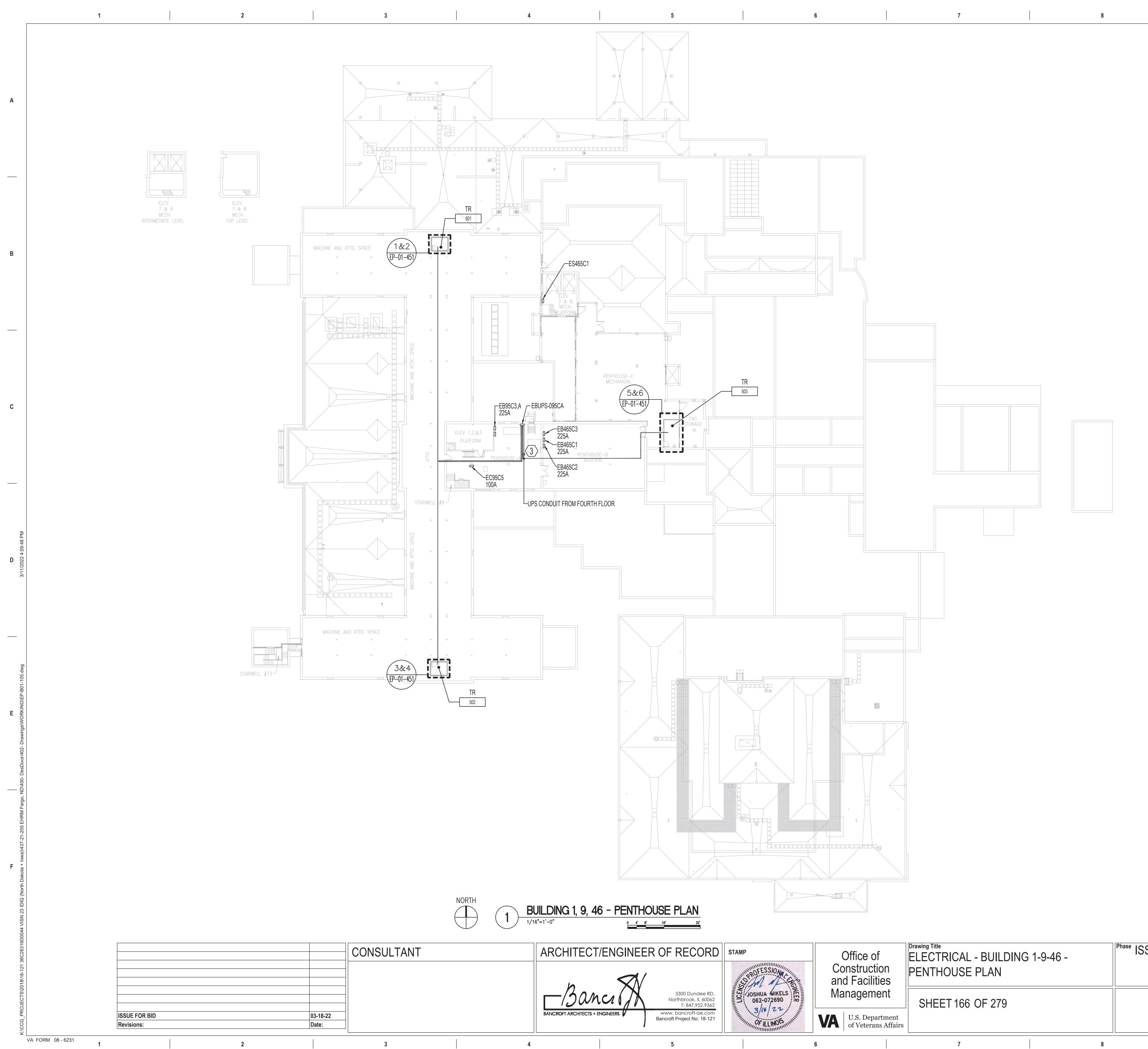


-	ARCHITECT/ENGINEER OF RECORD	STAMP	Office
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	BANCROFT ARCHITECTS + ENGINEERS Www.bancroft-ae.com Bancroft Project No: 18-121	0F ILLINOIS	VA U.S. De of Vete

- CIRCUIT NUMBERS.



of	Drawing Title ELECTRICAL - BUILDING 1-9-46 - ENLARGED PLANS - FOURTH FLOOR		Phase ISSUE FOR BID	Project Title EHRM INFRASTRUCTU UPGRADES		
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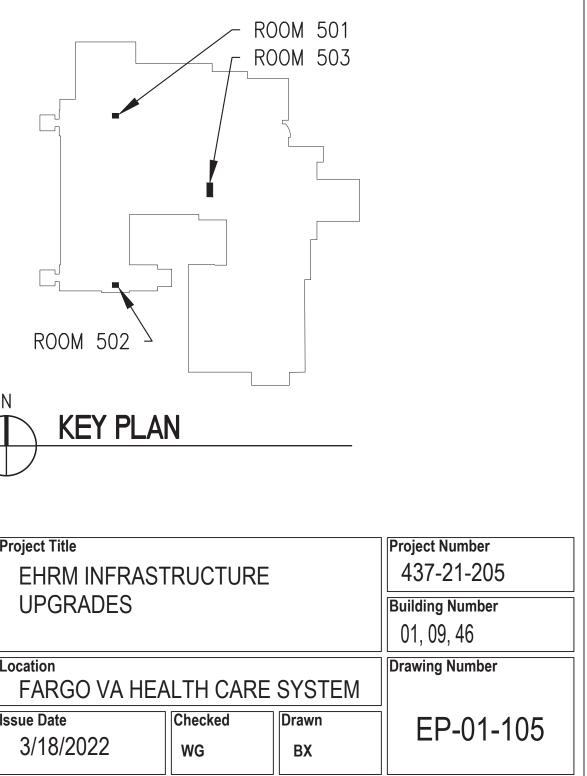


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- A. CONTRACTOR TO DETERMINE DETAILED CONI B. NORMAL POWER TO WALL OUTLETS AND LIGH IN THE SAME BUILDING AS THE LOCATION OF ROUTING BASED ON FIELD CONDITIONS. THIS THIS ROUTING IS DIFFERENT, IT WILL BE NOTE C. UPS POWER IS ON THE EMERGENCY CRITICAL
- FROM NORMAL POWER. D. EQUIPMENT POWER TO TECHNOLOGY ROOM BRANCH OF EMERGENCY POWER AND MUST B POWER.
- E. CONTACT VA IT PRIOR TO WORKING IN IT CLOS
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- ROUTE BASED ON FIELD CONDITIONS.

$\langle X \rangle$	ELECTRICAL
1.	INSTALL LIGHTING FIXTURES PER LIGHTING SC INSTALLING LIGHTING TO DETERMINE OPTIMU

- 2. INSTALL LIGHTING CONTROLS PER nLIGHT DETAIL ON DRAWING E501.
- 3. ROUTE UPS BRANCH CIRCUITS TO FEED RACKS FROM 4th FLOOR PNL EBUPS095CA. CONTRACTOR TO DETERMINE BEST ROUTING BASED ON FIELD CONDITIONS.





of	Drawing Title ELECTRICAL - BUILDING 1-9-46 - PENTHOUSE PLAN SHEET 166 OF 279		Phase ISSUE FOR BID		Project Title EHRM INFRASTRUCTU UPGRADES		
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S E600 FOR PANEL SCHEDULES AND CIRCUIT
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A L21-30R, LOCKING RECEPTACLE.
NTHOUSE TR'S IS "PROPOSED", CONTRACTOR TO

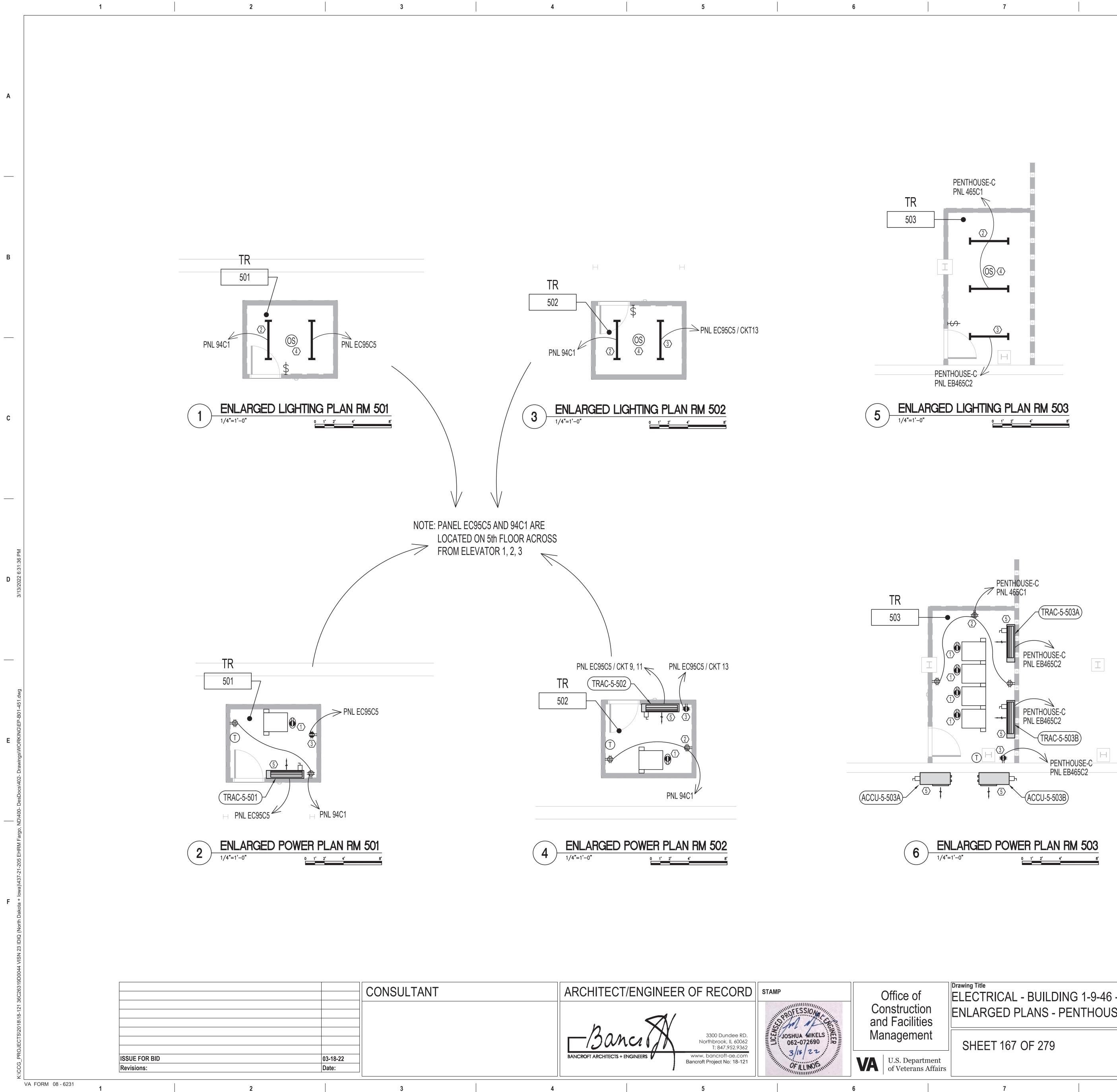
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## **KEY NOTES**

CHEDULE. CONTACT COR PRIOR TO IMUM LOCATION FOR LIGHT FIXTURES.



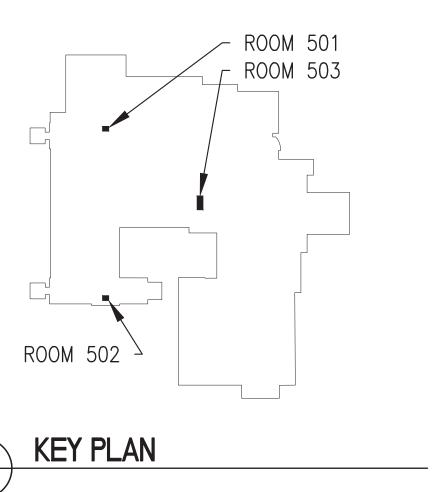
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## ELECTRICAL GENE

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- J. RECEPTACLES ABOVE RACKS MUST BE NEMA L21-30R, LOCKING RECEPTACLES.
- K. INSTALL LIGHTING CONTROLS PER LIGHTING DETAIL ON DETAIL DRAWING E501.

## ELECTRICAL KEY NOTES $\langle X \rangle$ 1. UPS POWER TO RACKS. 2. NORMAL POWER TO ROOM RECEPTACLES, AND LIGHTS. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.

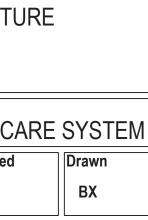
- 3. EMERGENCY POWER TO ROOM RECEPTACLES AND LIGHTS. CONTACT COR PRIOR TO INSTALLING LIGHTING TO DETERMINE OPTIMUM LOCATION FOR LIGHT FIXTURES.
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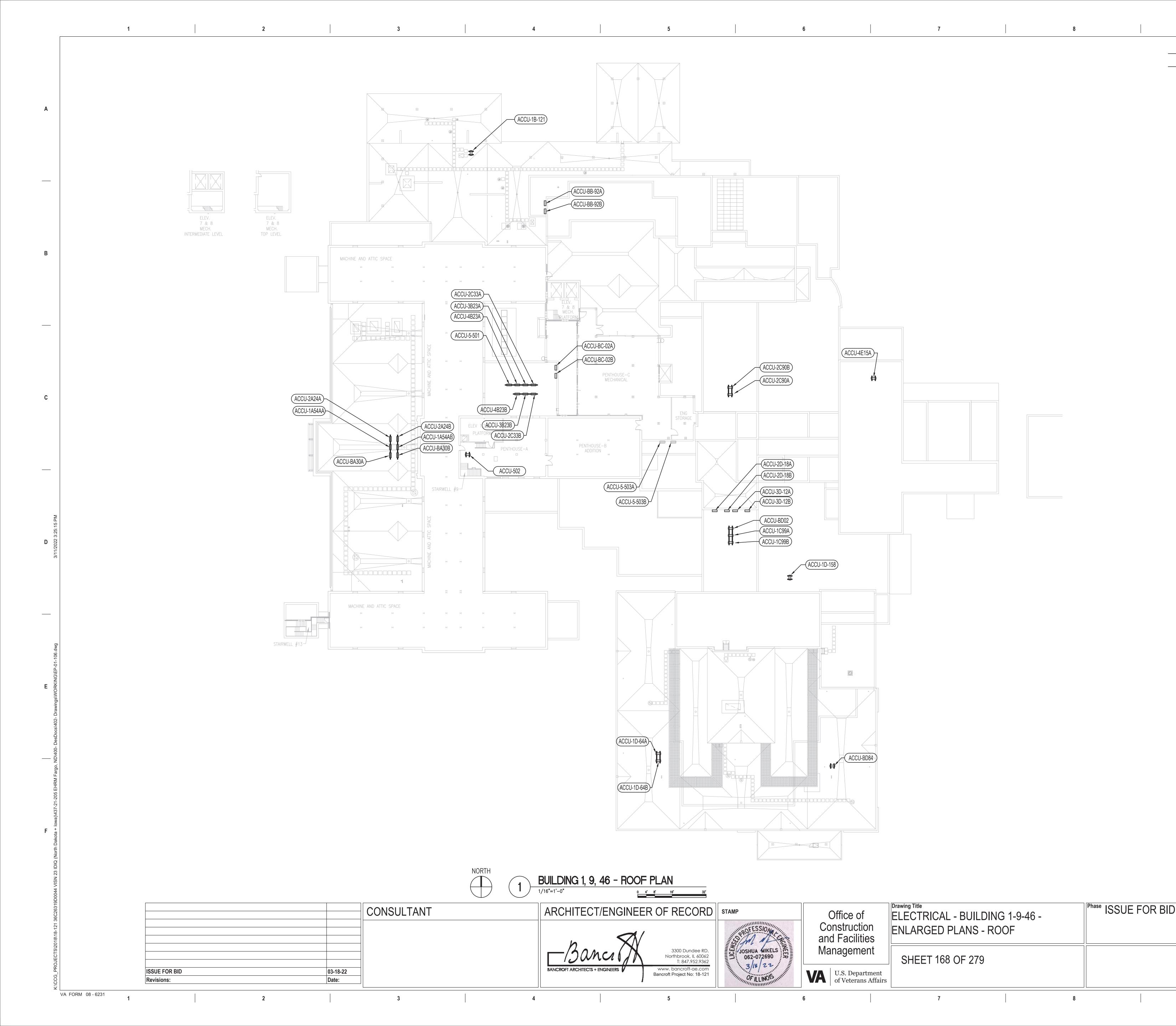


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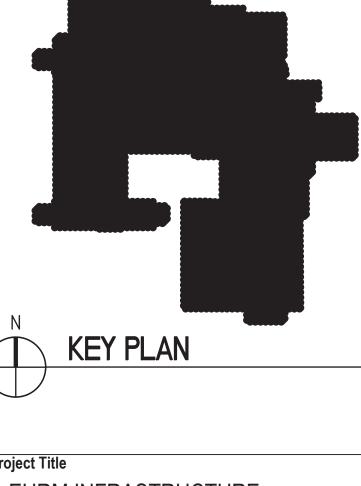
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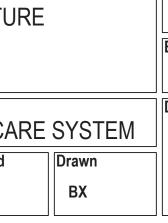
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- A. MECHANICAL EQUIPMENT SHOWN ON DRAW
   B. ELECTRICAL CONTRACTOR TO WORK WITH MI FROM POWER PANEL TO DISCONNECT(S) AT E DISCONNECT(S) ON OUTDOOR CONDENSER U EVAPORATOR UNITS TO CONDENSER UNITS SI SUPPORTS.
- C. SEE WIRING DETAIL AND BLOCK DIAGRAM OF EVAPORATORS AND CONDENSING UNITS.
- D. INSTALL A NEMA 1 2-POLE DISCONNECT AT EAD DISCONNECT AT EACH CONDENSING UNIT. NUSED TO ROUTE THE RED 120V CONTROL WINE EVAPORATORS AND CONDENSING UNITS.
- E. EQUIPMENT POWER TO TECHNOLOGY ROOM BRANCH OF EMERGENCY POWER AND MUST POWER.
- F. CONTACT VA IT PRIOR TO WORKING IN IT CLOS
- G. FOLLOW VA NEC 70E LOCK OUT TAG OUT PRO



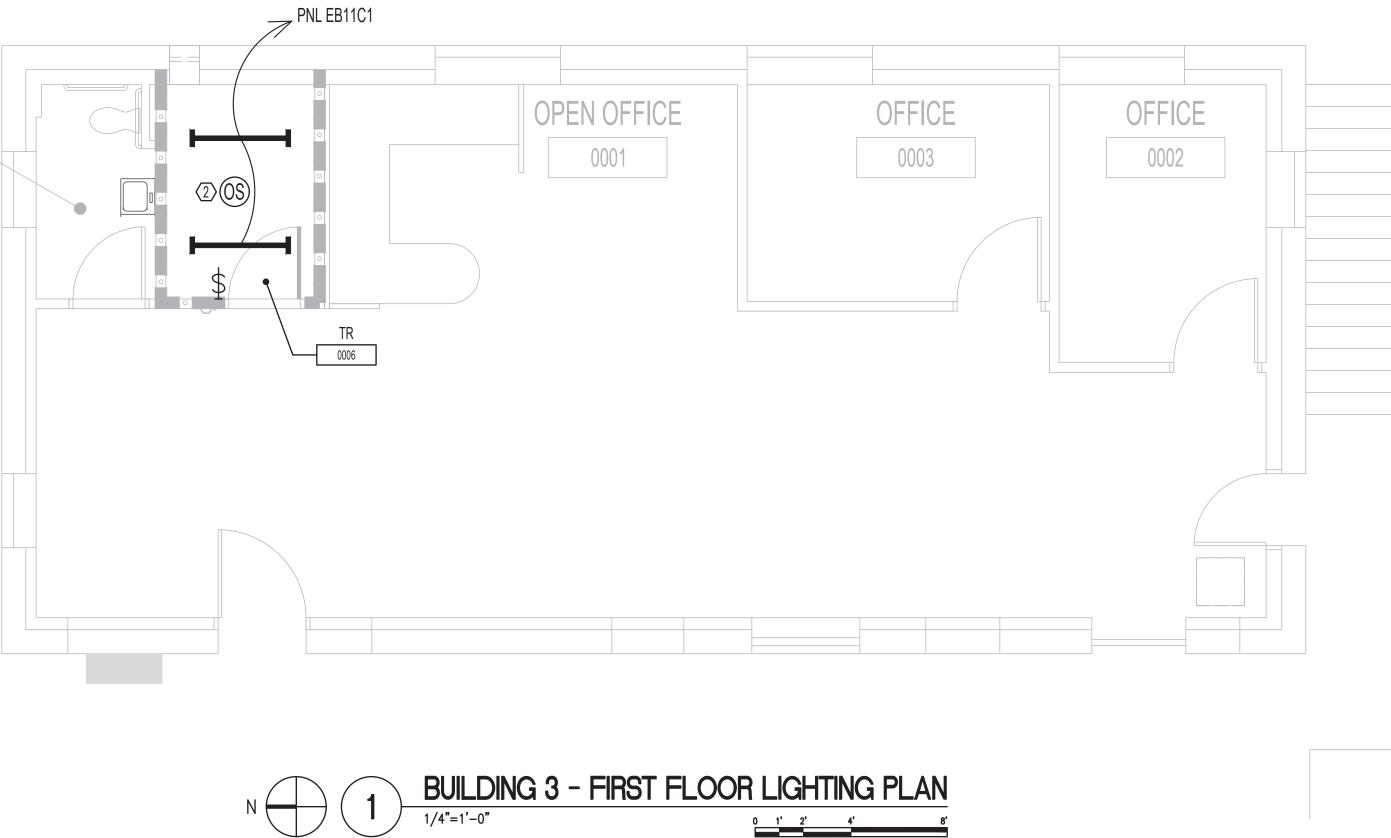
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ENERAL NOTES	
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ON DRAWING E501 FOR WIRING AND CONDUIT TO EACH EVAPORATOR AND A NEMA 3R 2-POLE	
NOTE THAT THE DISCONNECT BODIES ARE ALSO /IRE_AND GROUND WIRES BETWEEN THE	
M FANS AND CONDENSERS IS FROM EQUIPMENT T BE IN CONDUITS SEPARATE FROM NORMAL	
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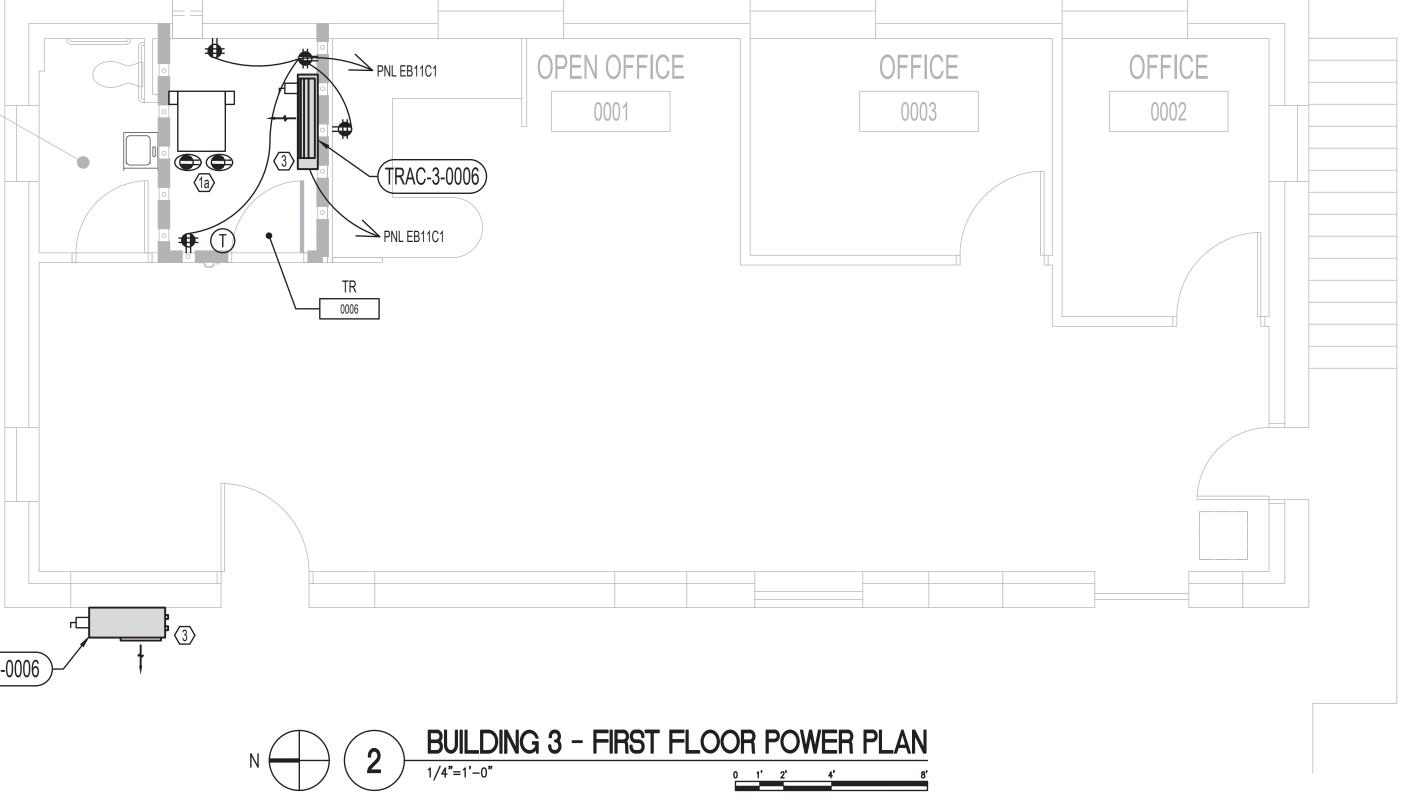
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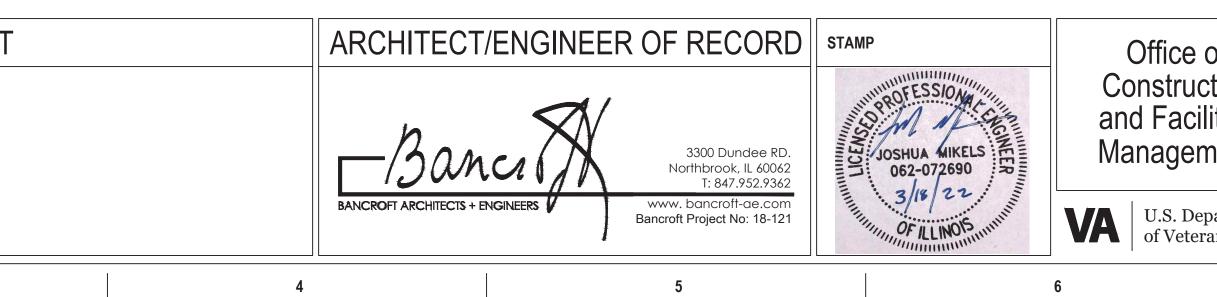
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## ELECTRICAL GE

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- G. INSTALL LIGHTING CONTROLS PER LIGHTING D H. ONLY PANEL IS IDENTIFIED FOR WIRING. CONT CONDITIONS.

### ELECTRICAL $\langle X \rangle$

- 1. EMERGENCY POWER TO ROOM RACK, RECEPT. TERMINATE FROM EXISTING EMERGENCY POV
- a. PROVIDE TWO L21-30 RECEPTACLES TO TOP C BLDG.
- b. TERMINATE EMERGENCY POWER TO LIGHTS 20A, 120V CIRCUIT. CONTACT COR PRIOR TO OPTIMUM LOCATION FOR LIGHT FIXTURES.
- 2. OCCUPANCY SENSOR HIGH MOUNT.

3. ONLY BRANCH CIRCUIT IS SHOWN FROM POW CONDUIT AND WIRE PER DETAIL ON DRAWING MECHANICAL CONTRACTOR TO ROUTE POWER CONDUIT MUST BE CONCEALED IN WALLS OR

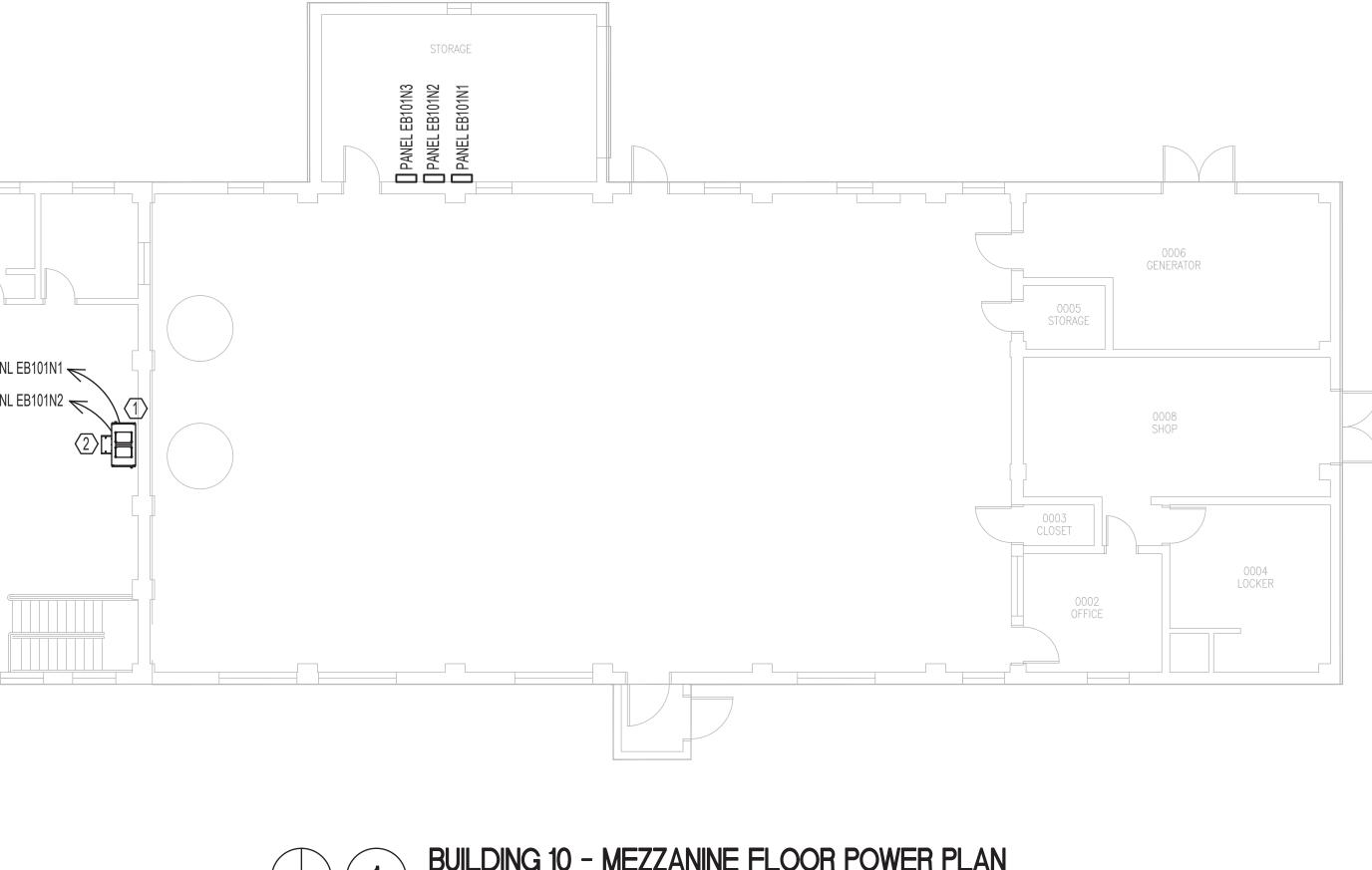
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ENERAL NOTES	
A CENTER OR IT CLOSET. RING OR DAMAGING EQUIPMENT.	
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NAL CLOSET, AND MUST REMAIN OPERATIONAL. NG WORK THAT CREATES DUST.	
EW/RELOCATED TR CLOSETS. ELECTRICAL WORK HAT REMAIN OPERATIONAL.	
EW RACK SHALL BE ABOVE RACK, MUST BE NEMA	
DETAIL ON DETAIL DRAWING E501.	
KEY NOTES	
PTACLES, AND LIGHTS. CONTRACTOR TO	
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P OF RACK FROM EMERGENCY POWER IN	
IS AND WALL RECEPTACLES FROM A 1-POLE, TO INSTALLING LIGHTING TO DETERMINE	
WER PANEL TO COOLING UNIT. INSTALL NG E501. CONTRACTOR TO WORK WITH	
VER AND TUBING TO OUTDOOR UNIT. OR FROM BELOW.	
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C					PNL EB101N1 PNL EB101N2 (2)				0006 GENERATOR	
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S/2018/18-121 36C26319D0044 VISN 23 IDIQ					CONSULTANT	ARCHITECT/ENGINE	V	STAMP NUMPROFESSION JOSHUA MIKELS 062-072690	Office of Construction and Facilities Management	Drawing Title ELECTRICAL PLANS - FIRS
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## ELECTRICAL GENERAL NOTES

- A. CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET. B. USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT. C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED, IT COMMUNICATIONS EQUIPMENT WILL BE MOVED TO NEW TR ROOM. "BIOENGINEERING" TYPE EQUIPMENT, I.E. SECURITY, NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINAL CLOSET, AND MUST REMAIN OPERATIONAL.
- D. PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST. E. NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL
- WORK IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL.
- SELECT EMERGENCY POWER FOR THE EMCOR OR EQUAL CABINET.

#### ELECTRICAL KEY NOTES $\langle X \rangle$

- 1. FROM PANEL EB101N1, TERMINATE ONE 30A, 3-POLE, 208/120V CIRCUIT TO THE POWER CONNECTION ON THE EMCOR OR EQUAL CABINET.
- 2. FROM PANEL EB101N2, TERMINATE ONE 30A, 3-POLE, 208/120V CIRCUIT TO THE HVAC CONNECTION ON THE EMCOR OR EQUAL CABINET.

	Drawing Title ELECTRICAL - BUILDING 10 - ENLARGE PLANS - FIRST FLOOR	Phase ISSUE FOR BID	Project Title EHRM INFRASTRUCTURE UPGRADES			
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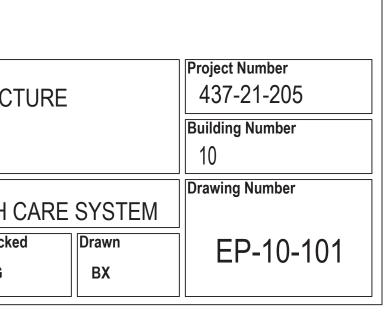
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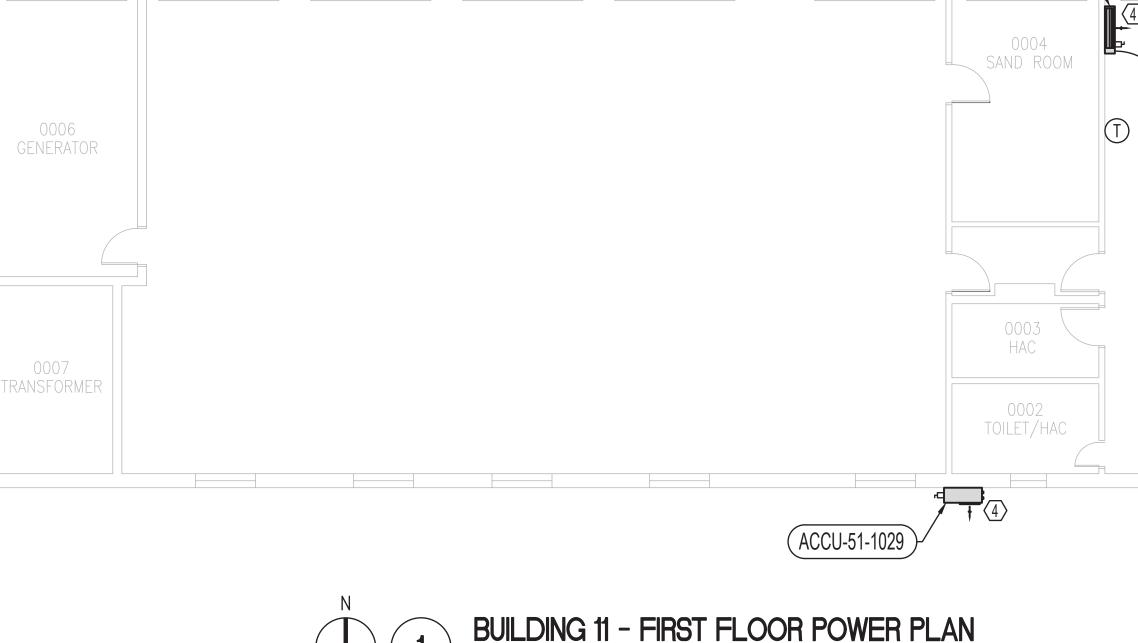
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F. TERMINATE BOTH POWER AND HVAC TO EMERGENCY (EB) POWER. CONTRACTOR TO



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		ELECTRICAL GENERAL NO
Α		<ul> <li>A. CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET.</li> <li>B. USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT</li> <li>C. PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST.</li> <li>D. CONNECT CONDUIT TO TOP OF TELECOMMUNICATIONS ENCLOSURE, AND RO MULTICONDUCTOR CABLE INSIDE BACK OF ENCLOSURE, AND TERMINATE WIT CONNECTOR, FOR UPS TO PLUG INTO.</li> <li>E. NOTE: SELECT PANELS EB101N1 AND EB101N2 CIRCUITS FOR TELECOMMUNIC ENCLOSURE.</li> </ul>
В		<ul> <li>ELECTRICAL KEY NOTES</li> <li>PROVIDE ONE 30A, 120V L5-30 RECEPTACLE TO TOP LEFT SIDE OF</li> </ul>
		<ol> <li>TELECOMMUNICATIONS ENCLOSURE.</li> <li>PROVIDE ONE 30A, 120V L5-30 RECEPTACLE TO TOP RIGHT SIDE OF TELECOMMUNICATIONS ENCLOSURE.</li> <li>PROVIDE ONE 20A, SINGLE POLE CIRCUIT TO EXHAUST FAN IN TELECOMMUNIC ENCLOSURE.</li> <li>ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT. IN CONDUIT AND WIRE PER DETAIL ON DRAWING ES01. CONTRACTOR TO WORK</li> </ol>
С	TRAC-11-0001	MECHANICAL CONTRACTOR TO ROUTE POWER AND TUBING TO OUTDOOR UN CONDUIT MUST BE CONCEALED IN WALLS OR FROM BELOW.
	0006 GENERATOR 0001 SHOP (OFFICE)	
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K:\CCG	ISSUE FOR BID Revisions:       03-18-22 Date:         VA FORM 08 - 6231       Date:             VA FORM 08 - 6231       3             A FORM 08 - 6231       5             VA FORM 08 - 6231       6	3/18/2022 wg BX 10

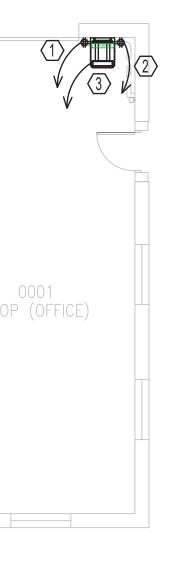


- A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WI
- C. PROTECT IT EQUIPMENT FROM DUST, DURIN
- D. CONNECT CONDUIT TO TOP OF TELECOMMU

- MULTICONDUCTOR CABLE INSIDE BACK OF E CONNECTOR, FOR UPS TO PLUG INTO.
- E. NOTE: SELECT PANELS EB101N1 AND EB101N ENCLOSURE.

## ELECTRICAL $\langle X \rangle$

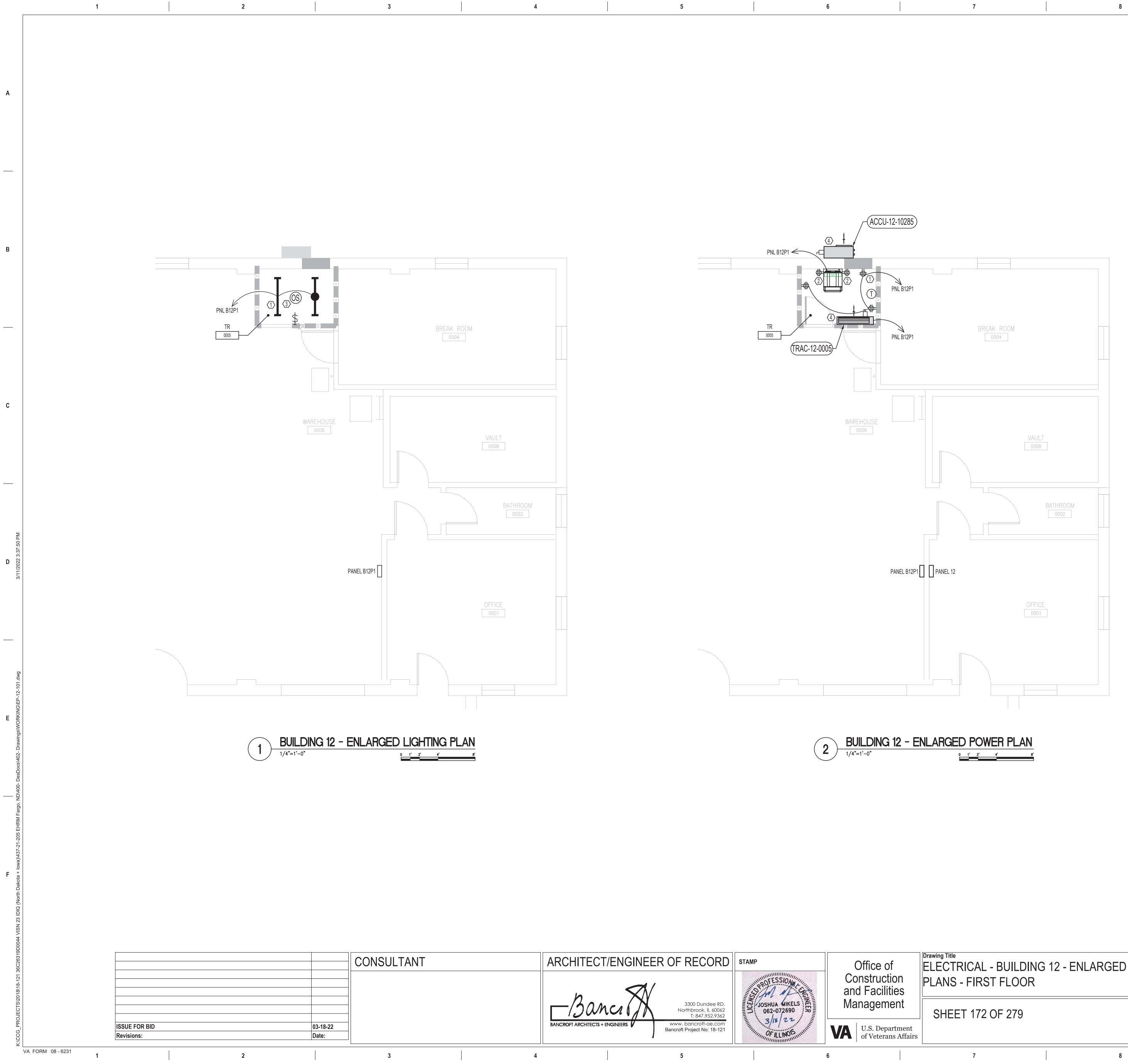
- PROVIDE ONE 30A, 120V L5-30 RECEPTACLE T TELECOMMUNICATIONS ENCLOSURE.
- 2. PROVIDE ONE 30A, 120V L5-30 RECEPTACLE T TELECOMMUNICATIONS ENCLOSURE.
- 3. PROVIDE ONE 20A, SINGLE POLE CIRCUIT TO F ENCLOSURE.
- 4. ONLY BRANCH CIRCUIT IS SHOWN FROM POV CONDUIT AND WIRE PER DETAIL ON DRAWIN MECHANICAL CONTRACTOR TO ROUTE POWE CONDUIT MUST BE CONCEALED IN WALLS OF

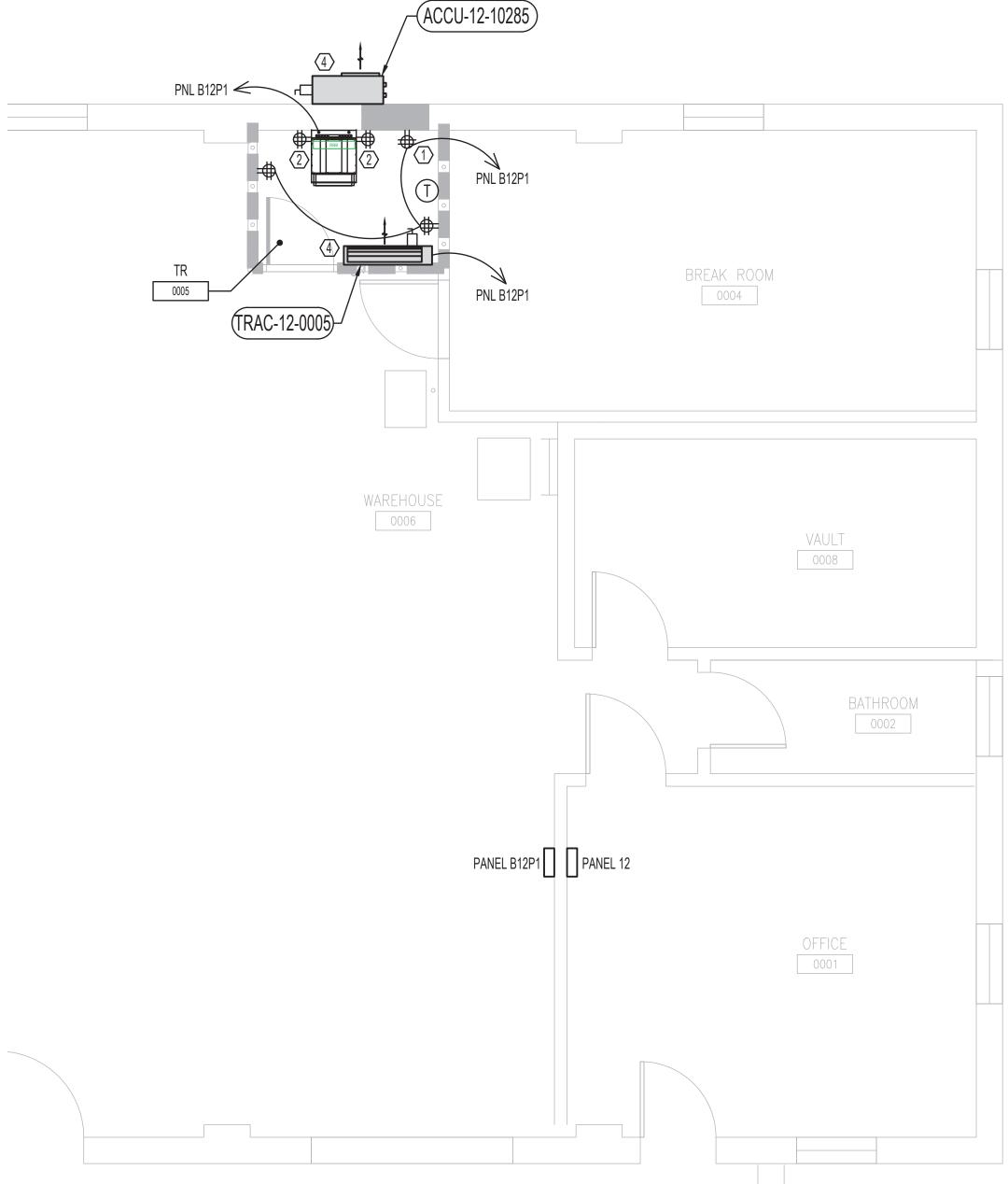


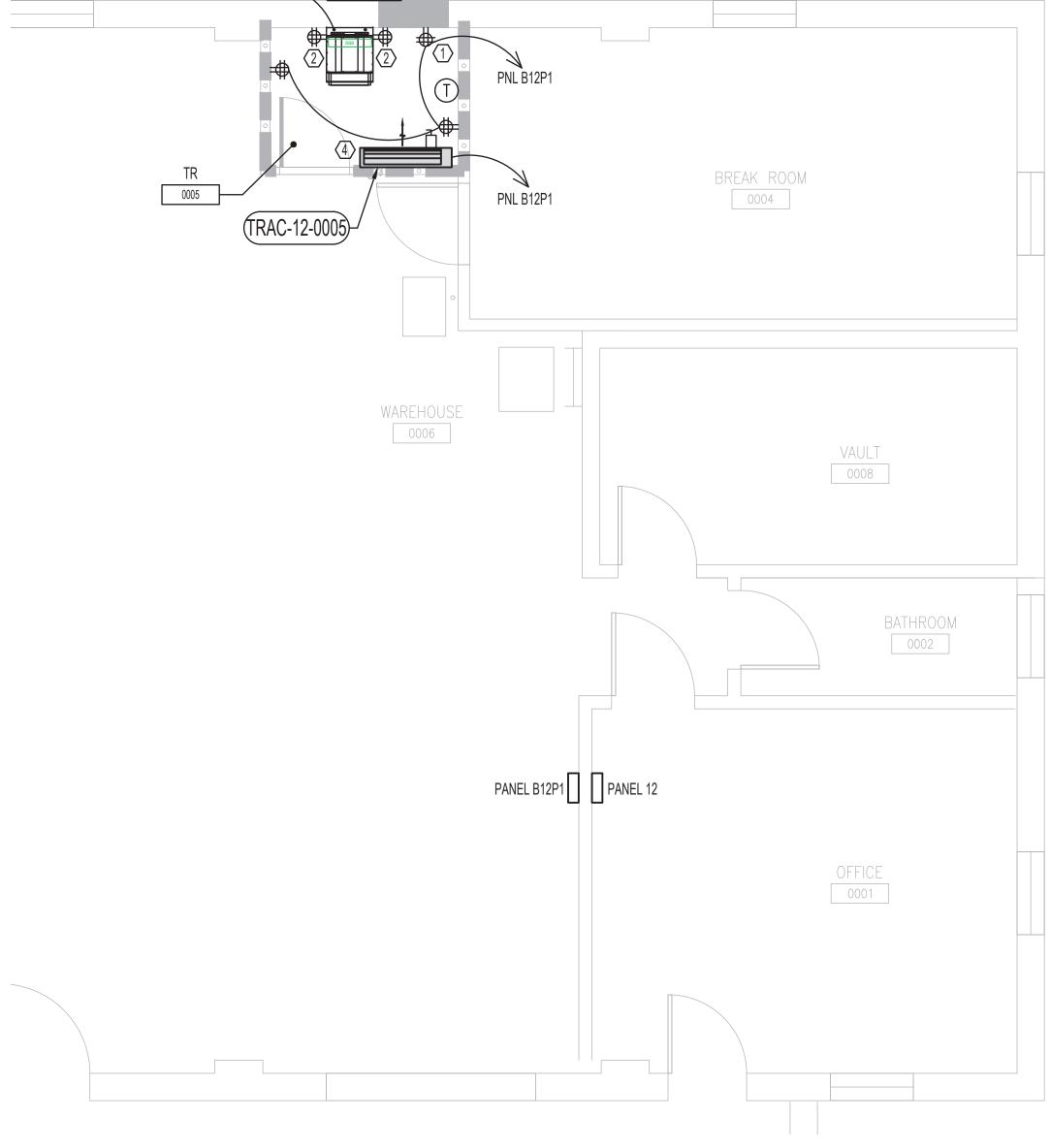
P PROFESSION		Drawing Title ELECTRICAL - BUILDING 11 - ENLARGED PLANS - FIRST FLOOR GARAGE	Phase ISSUE FOR BID	Project Title EHRM INFRASTF UPGRADES	RUCTI
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A. CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET. B. USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT. C. PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST.

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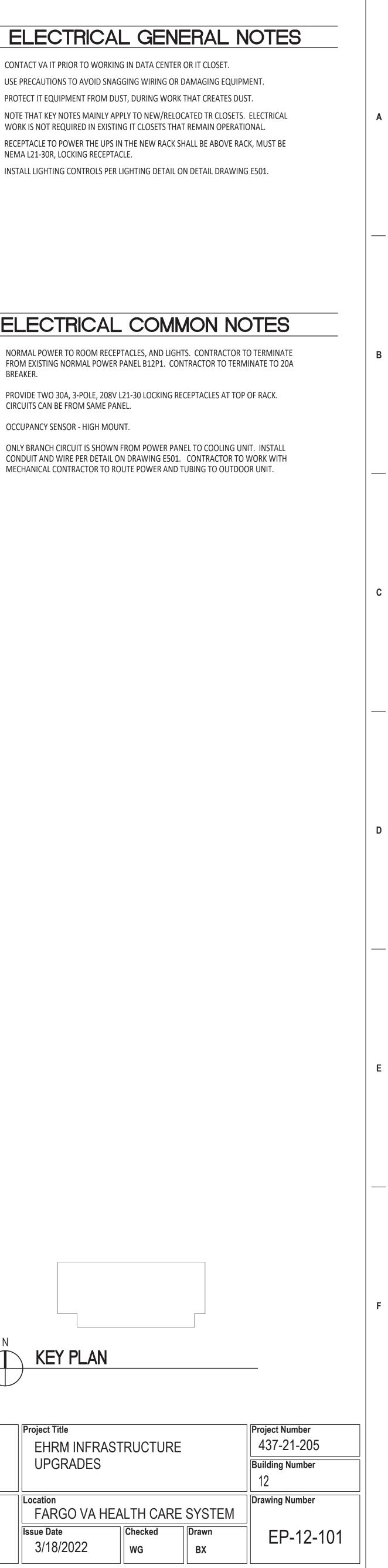
- D. NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL
- WORK IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL.
- E. RECEPTACLE TO POWER THE UPS IN THE NEW RACK SHALL BE ABOVE RACK, MUST BE NEMA L21-30R, LOCKING RECEPTACLE.
- F. INSTALL LIGHTING CONTROLS PER LIGHTING DETAIL ON DETAIL DRAWING E501.

## ELECTRICAL COMMON NOTES

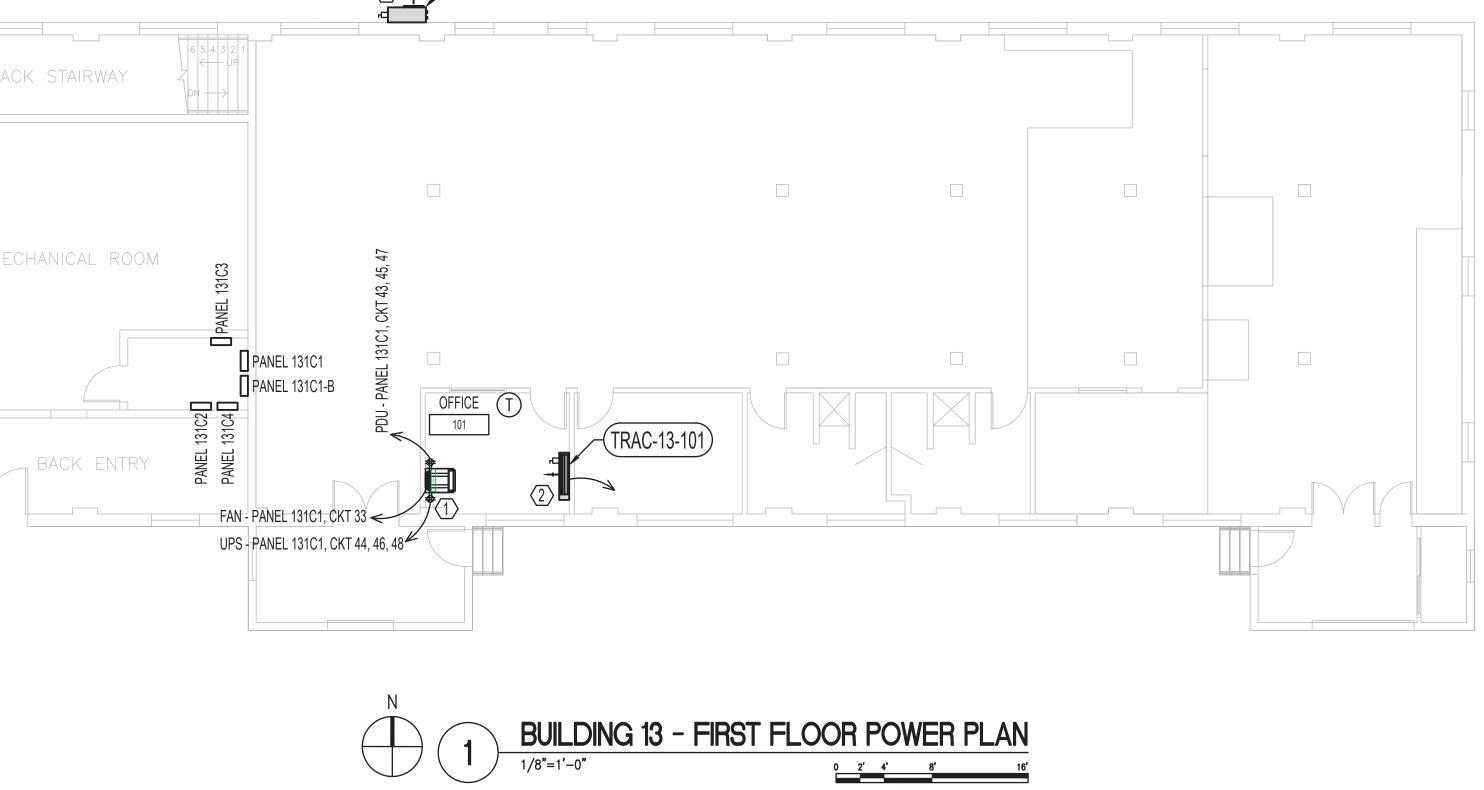
- 1. NORMAL POWER TO ROOM RECEPTACLES, AND LIGHTS. CONTRACTOR TO TERMINATE FROM EXISTING NORMAL POWER PANEL B12P1. CONTRACTOR TO TERMINATE TO 20A BREAKER.
- 2. PROVIDE TWO 30A, 3-POLE, 208V L21-30 LOCKING RECEPTACLES AT TOP OF RACK. CIRCUITS CAN BE FROM SAME PANEL.
- 3. OCCUPANCY SENSOR HIGH MOUNT. 4. ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT. INSTALL
- CONDUIT AND WIRE PER DETAIL ON DRAWING E501. CONTRACTOR TO WORK WITH MECHANICAL CONTRACTOR TO ROUTE POWER AND TUBING TO OUTDOOR UNIT.



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A. CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET.

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- B. USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT.
- C. PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST. D. RECEPTACLE TO POWER THE UPS AND PDU IN THE NEW RACK SHALL BE ABOVE RACK,
- MUST BE NEMA L21-30R, LOCKING RECEPTACLES.

## ELECTRICAL KEY NOTES $\langle X \rangle$

- 1. NORMAL POWER TO RACK AND PDU. CONTRACTOR TO TERMINATE TWO L5-30 30A, 1-POLE, TO TWO 120V BREAKERS ON PANEL 131C1.
- 2. ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT. INSTALL CONDUIT AND WIRE PER DETAIL ON DRAWING E501. CONTRACTOR TO WORK WITH MECHANICAL CONTRACTOR TO ROUTE POWER AND TUBING TO OUTDOOR UNIT.

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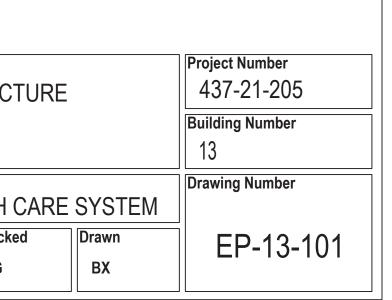
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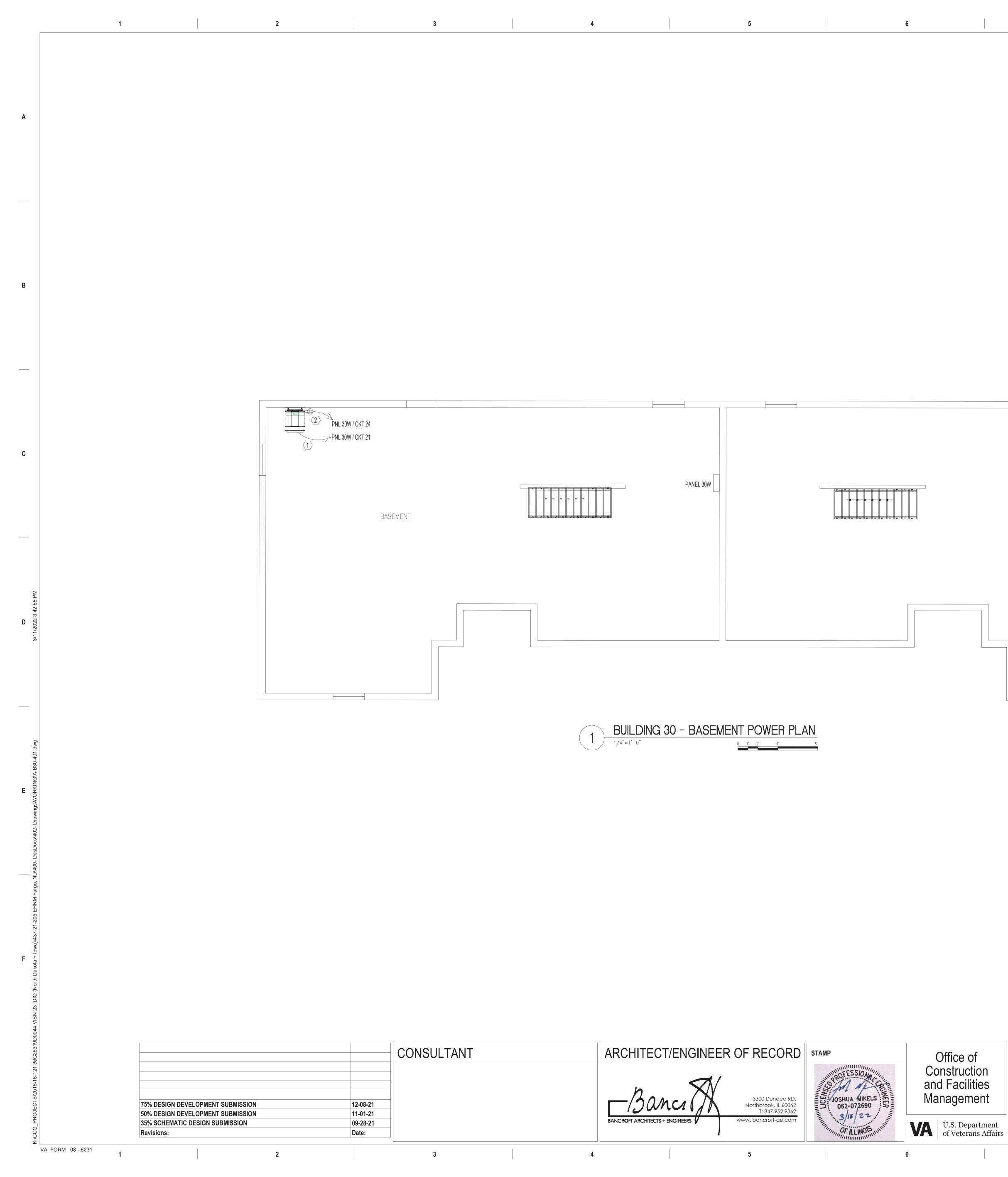
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## ELECTRICAL GENERAL NOTES





A. CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET.

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- B. USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT.
- C. PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST.
- D. NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL.
- E. NOTE: BUILDING 30 HAS 240V RESIDENTIAL POWER, AND CAN ONLY PROVIDE TWO 120V CIRCUITS. ONE CIRCUIT FOR A 120V UPS, AND ONE CIRCUIT FOR SMALL EXHAUST FAN
- F. CONNECT CONDUIT TO TOP OF COMMUNICATIONS ENCLOSURE, AND ROUT MULTICONDUCTOR CABLE INSIDE BACK OF ENCLOSURE, AND TERMINATE WITH L5-20 CONNECTOR, FOR UPS TO PLUG INTO.

#### ELECTRICAL KEY NOTES $\langle X \rangle$

- 1. CONTRACTOR TO TERMINATE FROM 120V NORMAL POWER PANEL. CONNECT ONE 15A, 1-POLE, 120V CIRCUIT TO THE UPS INSIDE THE WALL MOUNTED CABINET. USE 2#10 & 1#8G, ¾ IN C, CABLE FROM NORMAL POWER PANEL TO PLUG INSIDE WALL CABINET. THERE IS NO SPACE FOR CONDUIT INSIDE THE CABINET, SO CONDUCTORS MUST BE A CABLE.
- 2. CONTRACTOR TO TERMINATE FROM 120V NORMAL POWER PANEL. CONNECT ONE 15A, 1-POLE, 120V CIRCUIT TO FAN. USE 2#10 & 1#8G, ¾ IN C, CABLE FROM NORMAL POWER PANEL TO FAN INSIDE WALL CABINET.

BASEMENT

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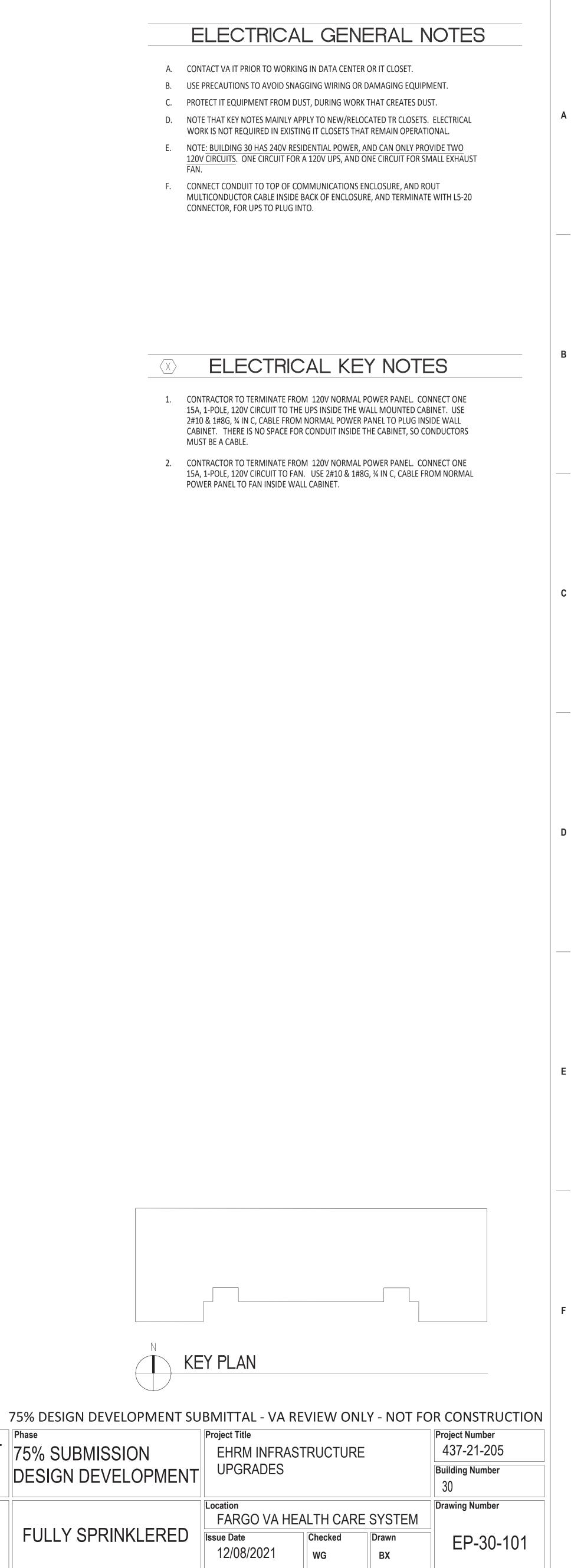
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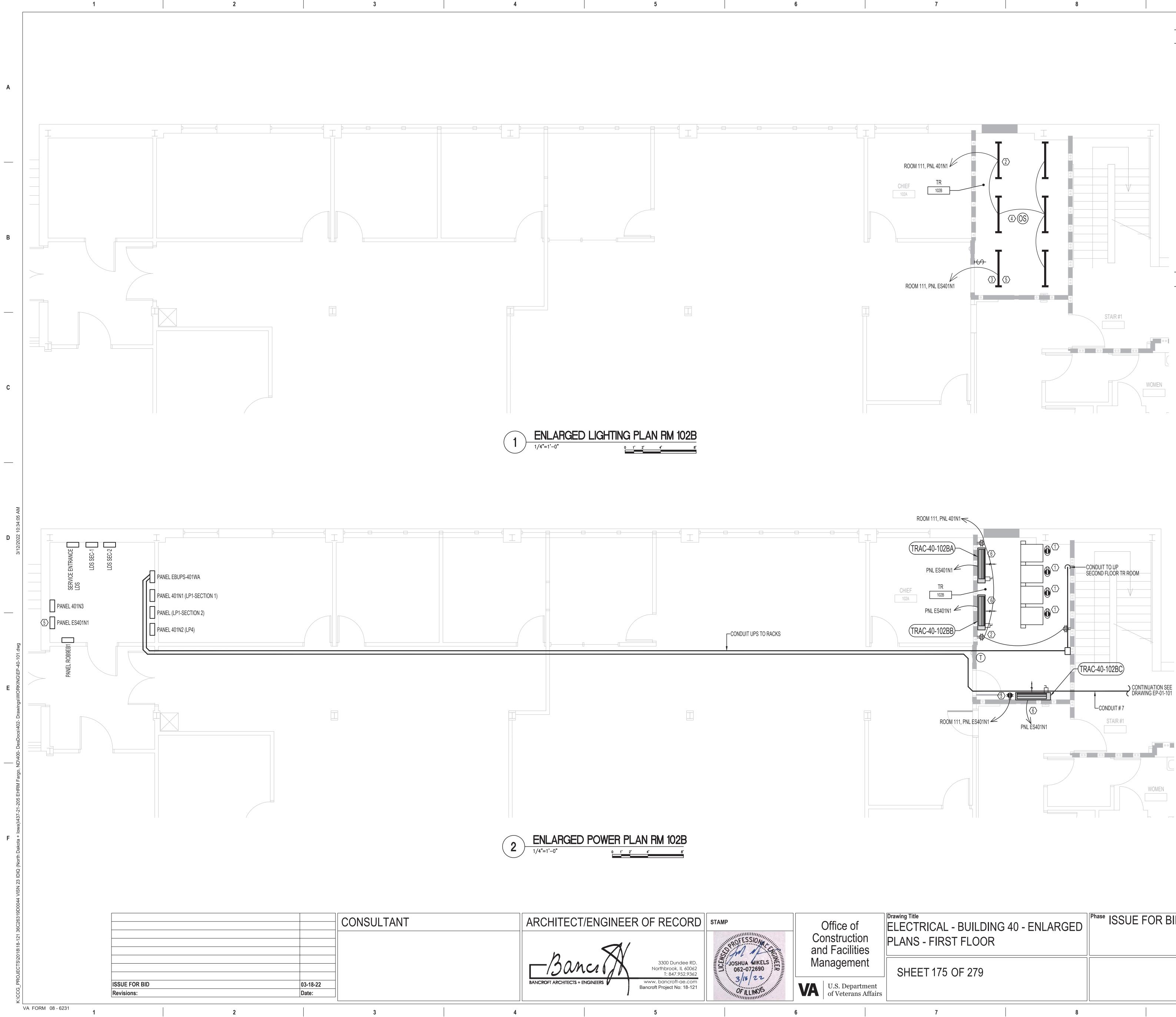
Ν KEY PLAN 

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Drawing Title ELECTRICAL - BUILDING 30 - BASEMENT **Project Title** Phase 75% SUBMISSION EHRM INFRASTRUCTURE UPGRADES POWER PLAN DESIGN DEVELOPMENT Approved: Project Director Location FARGO VA HEALTH CARE SYSTEM SHEET 174 OF 279 FULLY SPRINKLERED Issue Date Checked 12/08/2021 WG

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A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WI

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- C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED BE MOVED TO NEW TR ROOM. "BIOENGINE NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN
- OPERATIONAL. D. PROTECT IT EQUIPMENT FROM DUST, DURIN
- E. SEE PANEL SCHEDULES ON DRAWING SERIES UPS CIRCUIT NUMBERS.
- F. NORMAL AND EMERGENCY WIRING TO TR R ON INDIVIDUAL EP DRAWINGS. NOTATION F CIRCUIT). CONTRACTOR TO INSTALL NEW 20 INDEX.
- G. SEE DRAWING SERIES E700 FOR SINGLE LINE H. NOTE THAT KEY NOTES MAINLY APPLY TO NEV WORK IS NOT REQUIRED IN EXISTING IT CLOS
- I. POWER TO RACKS / CABINETS IN NEW TR'S M RACKS / CABINETS. NO POWER WIRING ON I
- J. RECEPTACLES ABOVE RACKS MUST BE NEMA
- K. INSTALL LIGHTING CONTROLS PER LIGHTING L. INSTALL PANEL EBUPS401WA IN ELECTRIC CL

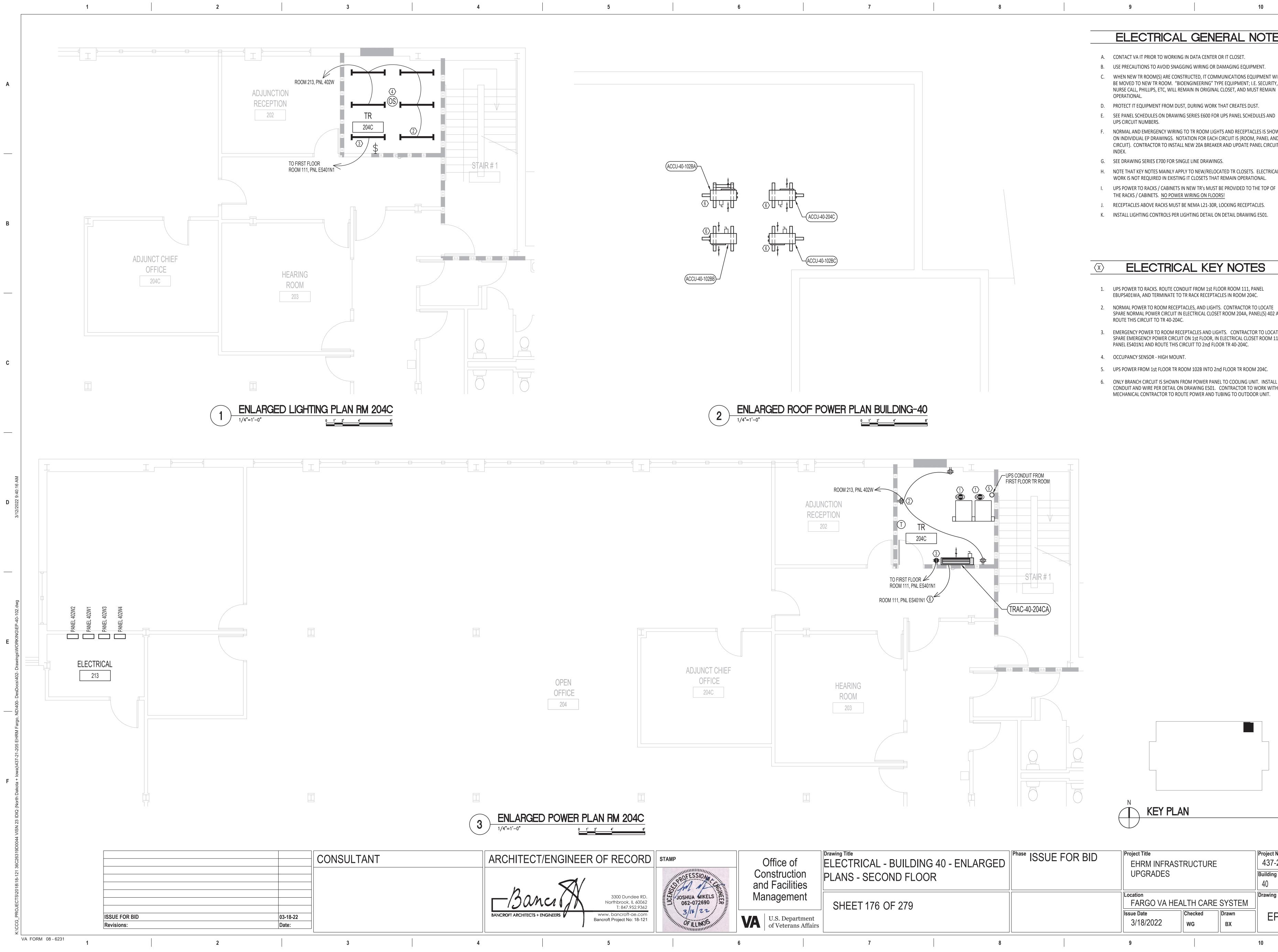
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- 1. POWER TO RACKS. CONTRACTOR TO SELECT UPS91 BLDG 40 FOR THE FOUR TR RACKS.
- 2. NORMAL POWER TO ROOM RECEPTACLES, AN SPARE NORMAL POWER CIRCUIT IN ELEC. CLO ROUTE THIS CIRCUIT TO TR 102B.
- 3. EMERGENCY POWER TO ROOM RECEPTACLES SPARE EMERGENCY POWER CIRCUIT IN ELECT AND ROUTE THIS CIRCUIT TO TR 102B.
- 4. OCCUPANCY SENSOR HIGH MOUNT.

5. LIGHT FIXTURE FROM PNL ES401N1. CONTAC FIXTURES TO SELECT OPTIMUM LIGHT FIXTUR 6. ONLY BRANCH CIRCUIT IS SHOWN FROM POV CONDUIT AND WIRE PER DETAIL ON DRAWIN

1!	Drawing Title ELECTRICAL - BUILDING 40 - ENLARGED PLANS - FIRST FLOOR			Phase ISSUE FO	OR BID	Project Title EHRM INFRA UPGRADES	ASTRUCTI
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	ELECTRICAL GENERAL NOTES	
	CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET. USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT. WHEN NEW TR ROOM(S) ARE CONSTRUCTED, IT COMMUNICATIONS EQUIPMENT WILL BE MOVED TO NEW TR ROOM. "BIOENGINEERING" TYPE EQUIPMENT; I.E. SECURITY, NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINAL CLOSET, AND MUST REMAIN OPERATIONAL.	A
	PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST. SEE PANEL SCHEDULES ON DRAWING SERIES E600 FOR UPS PANEL SCHEDULES AND UPS CIRCUIT NUMBERS. NORMAL AND EMERGENCY WIRING TO TR ROOM LIGHTS AND RECEPTACLES IS SHOWN	
	ON INDIVIDUAL EP DRAWINGS. NOTATION FOR EACH CIRCUIT IS (ROOM, PANEL AND CIRCUIT). CONTRACTOR TO INSTALL NEW 20A BREAKER AND UPDATE PANEL CIRCUIT INDEX. SEE DRAWING SERIES E700 FOR SINGLE LINE DRAWINGS.	
	NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL. POWER TO RACKS / CABINETS IN NEW TR'S MUST BE PROVIDED TO THE TOP OF THE RACKS / CABINETS. <u>NO POWER WIRING ON FLOORS!</u> RECEPTACLES ABOVE RACKS MUST BE NEMA L21-30R, LOCKING RECEPTACLES. INSTALL LIGHTING CONTROLS PER LIGHTING DETAIL ON DETAIL DRAWING E501. INSTALL PANEL EBUPS401WA IN ELECTRIC CLOSET 111.	В
>	POWER TO RACKS. CONTRACTOR TO SELECT 30A, 3-POLE, 208V/120V CIRCUITS ON PNL	
	UPS91 BLDG 40 FOR THE FOUR TR RACKS. NORMAL POWER TO ROOM RECEPTACLES, AND LIGHTS. CONTRACTOR TO LOCATE SPARE NORMAL POWER CIRCUIT IN ELEC. CLOSET ROOM 111, PANELS 401N1, N2 AND	
	ROUTE THIS CIRCUIT TO TR 102B. EMERGENCY POWER TO ROOM RECEPTACLES AND LIGHTS. CONTRACTOR TO LOCATE SPARE EMERGENCY POWER CIRCUIT IN ELECTRICAL CLOSET ROOM 111, PANEL ES401N1	
	AND ROUTE THIS CIRCUIT TO TR 102B. OCCUPANCY SENSOR - HIGH MOUNT.	
	LIGHT FIXTURE FROM PNL ES401N1. CONTACT COR PRIOR TO INSTALLING LIGHT FIXTURES TO SELECT OPTIMUM LIGHT FIXTURE LOCATION. ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT. INSTALL	С
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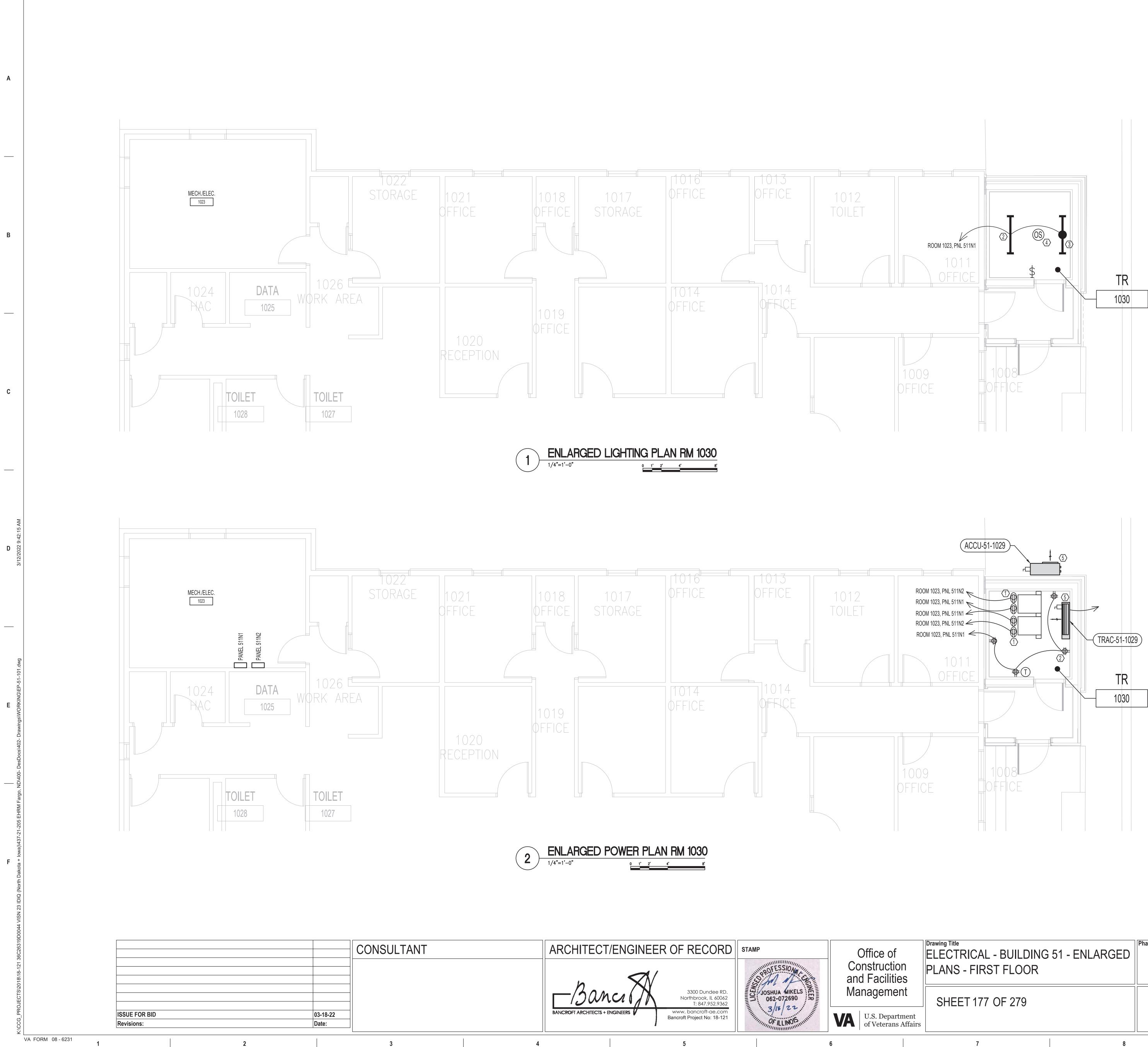
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PROTECT IT EQUIPMENT FROM D SEE PANEL SCHEDULES ON DRAW JPS CIRCUIT NUMBERS. NORMAL AND EMERGENCY WIRII ON INDIVIDUAL EP DRAWINGS. M CIRCUIT). CONTRACTOR TO INST.	VING SERIES E600 FOI NG TO TR ROOM LIGI NOTATION FOR EACH	R UPS PANEL SO HTS AND RECENT CIRCUIT IS (RC	CHEDULES AND PTACLES IS SHOWN DOM, PANEL AND	
NDEX. SEE DRAWING SERIES E700 FOR S NOTE THAT KEY NOTES MAINLY A WORK IS NOT REQUIRED IN EXIST JPS POWER TO RACKS / CABINET THE RACKS / CABINETS. <u>NO POW</u>	PPLY TO NEW/RELOG ING IT CLOSETS THA S IN NEW TR'S MUST	CATED TR CLOS T REMAIN OPE BE PROVIDED	RATIONAL.	
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NORMAL POWER TO ROOM RECE SPARE NORMAL POWER CIRCUIT ROUTE THIS CIRCUIT TO TR 40-20 EMERGENCY POWER TO ROOM R SPARE EMERGENCY POWER CIRC	IN ELECTRICAL CLOSE 4C. ECEPTACLES AND LIG	ET ROOM 204A GHTS. CONTRA	A, PANEL(S) 402 AND	
PANEL ES401N1 AND ROUTE THIS DCCUPANCY SENSOR - HIGH MOU JPS POWER FROM 1st FLOOR TR DNLY BRANCH CIRCUIT IS SHOWN CONDUIT AND WIRE PER DETAIL O MECHANICAL CONTRACTOR TO R	S CIRCUIT TO 2nd FLC JNT. ROOM 102B INTO 21 N FROM POWER PAN ON DRAWING E501.	OOR TR 40-2040 nd FLOOR TR R IEL TO COOLING CONTRACTOR	C. OOM 204C. G UNIT. INSTALL TO WORK WITH	С
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of	Drawing Title ELECTRICAL - BUILDI PLANS - SECOND FLC	GED	ISSUE FOR BID	Project Title EHRM INF UPGRADE	RASTRUCTU S
ment	SHEET 176 OF 279			Location FARGO VA	HEALTH CA
epartment erans Affairs				Issue Date 3/18/2022	Checked WG
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## ELECTRICAL GE

A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WIR C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED,

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- BE MOVED TO NEW TR ROOM. "BIOENGINEE NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN ( OPERATIONAL.
- D. PROTECT IT EQUIPMENT FROM DUST, DURING E. SEE PANEL SCHEDULES ON DRAWING SERIES F UPS CIRCUIT NUMBERS.
- F. NORMAL AND EMERGENCY WIRING TO TR RO ON INDIVIDUAL EP DRAWINGS. NOTATION F CIRCUIT). CONTRACTOR TO INSTALL NEW 204 INDEX.
- G. SEE DRAWING SERIES E700 FOR SINGLE LINE H. UPS POWER TO RACKS / CABINETS IN NEW TH
- THE RACKS / CABINETS. NO POWER WIRING I. RECEPTACLES ABOVE RACKS MUST BE NEMA
- J. INSTALL LIGHTING CONTROLS PER LIGHTING D

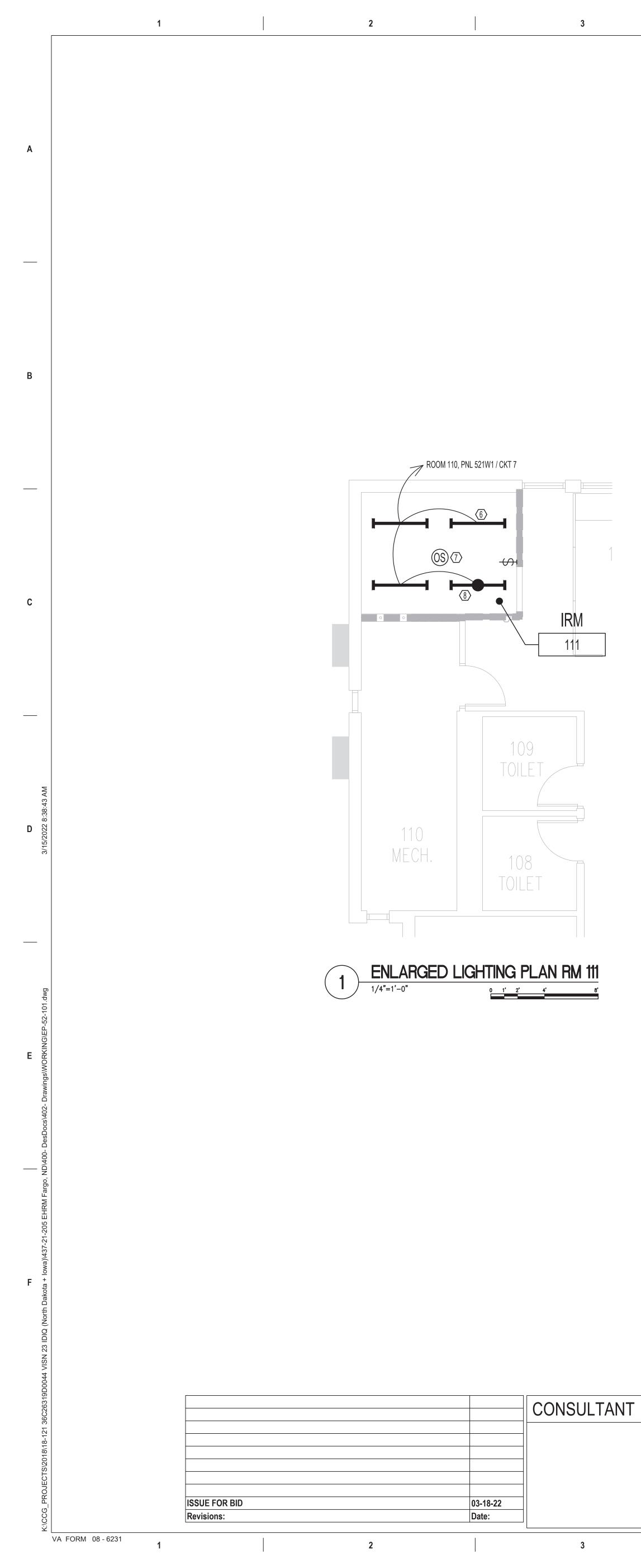
## ELECTRICAL CO

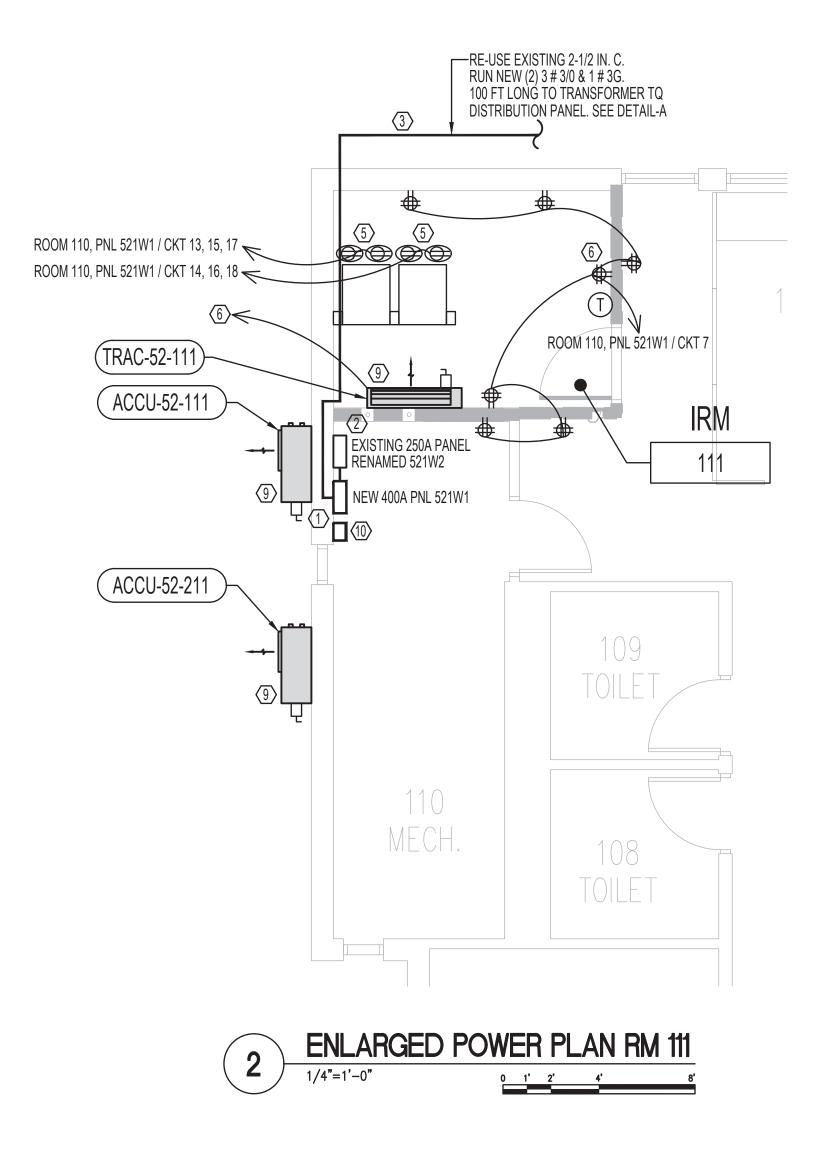
- 1. PROVIDE DUAL NORMAL POWER TO EACH RA IS NOT AVAILABLE. PROVIDE ONE CIRCUIT FR
- 2. PROVIDE NORMAL POWER TO ROOM RECEPT. 3. INSTALL BATTERY BACKED UP LIGHT FIXTURE. FIXTURES.
- 4. OCCUPANCY SENSOR HIGH MOUNT.
- 5. ONLY BRANCH CIRCUIT IS SHOWN FROM POW CONDUIT AND WIRE PER DETAIL ON DRAWIN MECHANICAL CONTRACTOR TO ROUTE POWE

		KEY PLAN
$\square$	$\mathcal{D}$	

e of	Drawing Title ELECTRICAL - BUILDING 51 - ENLARGED PLANS - FIRST FLOOR	Phase ISSUE FOR BID	Project Title EHRM INFRAS <sup>-</sup> UPGRADES	TRUCTI
ement	SHEET 177 OF 279		Location FARGO VA HEA	ALTH C/
Department erans Affairs			Issue Date 3/18/2022	Checked WG
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ENERAL NOTES	
TA CENTER OR IT CLOSET.	
'IRING OR DAMAGING EQUIPMENT. ED, IT COMMUNICATIONS EQUIPMENT WILL EERING" TYPE EQUIPMENT; I.E. SECURITY, N ORIGINAL CLOSET, AND MUST REMAIN	Α
NG WORK THAT CREATES DUST. S E600 FOR UPS PANEL SCHEDULES AND	
ROOM LIGHTS AND RECEPTACLES IS SHOWN FOR EACH CIRCUIT IS (ROOM, PANEL AND 20A BREAKER AND UPDATE PANEL CIRCUIT	
E DRAWINGS. TR's MUST BE PROVIDED TO THE TOP OF G ON FLOORS!	
A L21-30R, LOCKING RECEPTACLES. G DETAIL ON DETAIL DRAWING E501.	
	В
OMMON NOTES	
RACK, BECAUSE EMERGENCY OR UPS POWER FROM EACH PANEL IF POSSIBLE.	
PTACLES AND LIGHT FIXTURES. RE. CALL COR TO BEST LOCATE LIGHT	
OWER PANEL TO COOLING UNIT. INSTALL ING E501. CONTRACTOR TO WORK WITH VER AND TUBING TO OUTDOOR UNIT.	
	C
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TURE Project Number 437-21-205	
Building Number 51	
CARE SYSTEM Trawn EP-51-101	
BX 10	





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	ARCHITECT/ENGINEER	ROF RECORD 3300 Dundee RD. Northbrook, IL 60062 T: 847.952.9362 www. bancroft-ae.com Bancroft Project No: 18-121	STAMP STAMP STAMP SOSHUA MIKELS 062-072690 3/18 22	Co an	Office of	Drawing Title ELECTRICAL - PLANS - FIRST SHEET 178(
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## ELECTRICAL GE

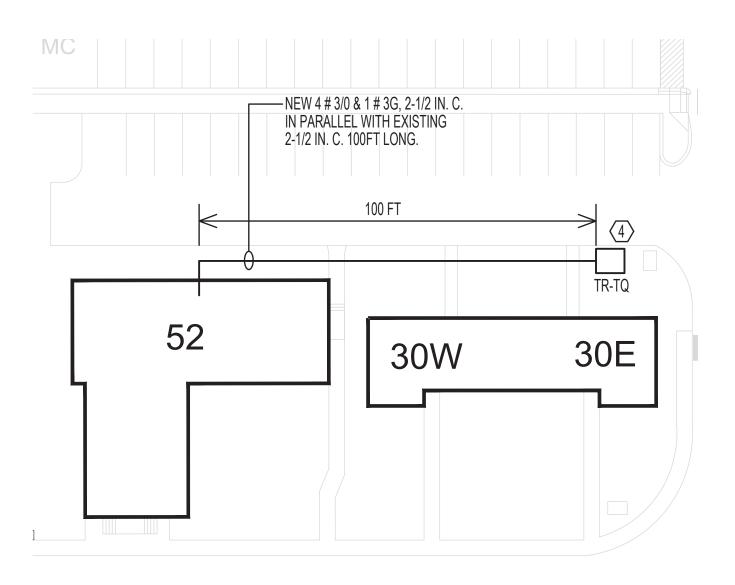
A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WIRI C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED,

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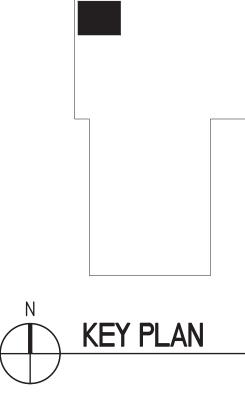
- BE MOVED TO NEW TR ROOM. "BIOENGINEE NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN O OPERATIONAL. D. PROTECT IT EQUIPMENT FROM DUST, DURING
- E. SEE PANEL SCHEDULES ON DRAWING SERIES E UPS CIRCUIT NUMBERS.
- F. NORMAL AND EMERGENCY WIRING TO TR RO ON INDIVIDUAL EP DRAWINGS. NOTATION FO CIRCUIT). CONTRACTOR TO INSTALL NEW 20A INDEX.
- G. SEE DRAWINGS ED708 AND E708 FOR SINGLE H. NOTE THAT KEY NOTES MAINLY APPLY TO NEW
- WORK IS NOT REQUIRED IN EXISTING IT CLOS I. POWER TO RACKS / CABINETS IN NEW TR'S M
- RACKS / CABINETS. NO POWER WIRING ON I J. RECEPTACLES ABOVE RACKS MUST BE NEMA L
- K. INSTALL LIGHTING CONTROLS PER LIGHTING D

#### ELECTRICAL $\langle X \rangle$

- 1. CONTRACTOR TO INSTALL NEW 400A PANEL 52
- 2. RENAME EXISTING 250A PANEL AS 521W2, AN 250A BREAKER.
- 3. RUN NEW 2-1/2 IN CONDUIT DOWN THROUGH EXISTING OTHER CONDUITS TO THE TRANSFO BUILDING 30. REUSE EXISTING 2-1/2 C FOR 2 SERVICE TO 400A. CONDUIT RUN IS APPROXIM
- 4. IN OUTSIDE TRANSFORMER DISTRIBUTION PA WITH NEW 400A BREAKER AND TERMINATE E BREAKER. TERMINATE IN BLDG 52 TO NEW 400
- 5. POWER TO RACKS. CONTRACTOR TO SELECT 3 521W1 FOR THE TR RACKS.
- 6. NORMAL POWER TO ROOM RECEPTACLES, AN SPARE NORMAL POWER CIRCUIT IN MECH. / E AND ROUTE THIS CIRCUIT TO TR 111.
- 7. OCCUPANCY SENSOR HIGH MOUNT.
- 8. LIGHT FIXTURE WITH BATTERY BACK-UP.
- 9. ONLY BRANCH CIRCUIT IS SHOWN FROM POW CONDUIT AND WIRE PER DETAIL ON DRAWING MECHANICAL CONTRACTOR TO ROUTE POWER
- 10. INSTALL SURGE SUPPRESSER ON NEW 400A F



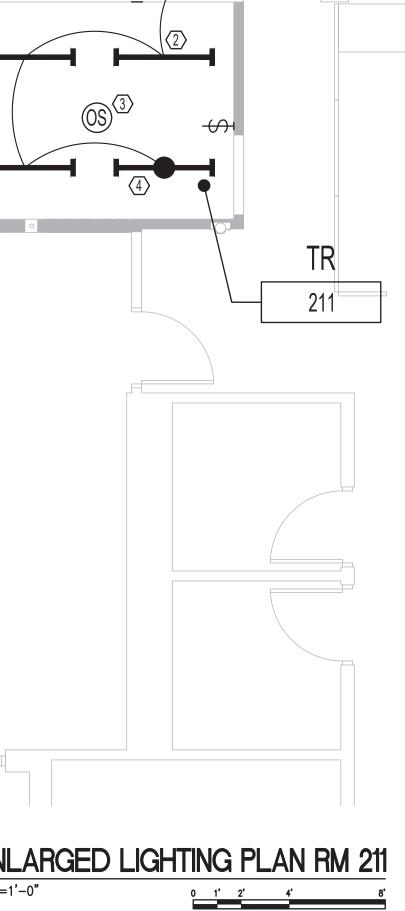
DETAIL-A

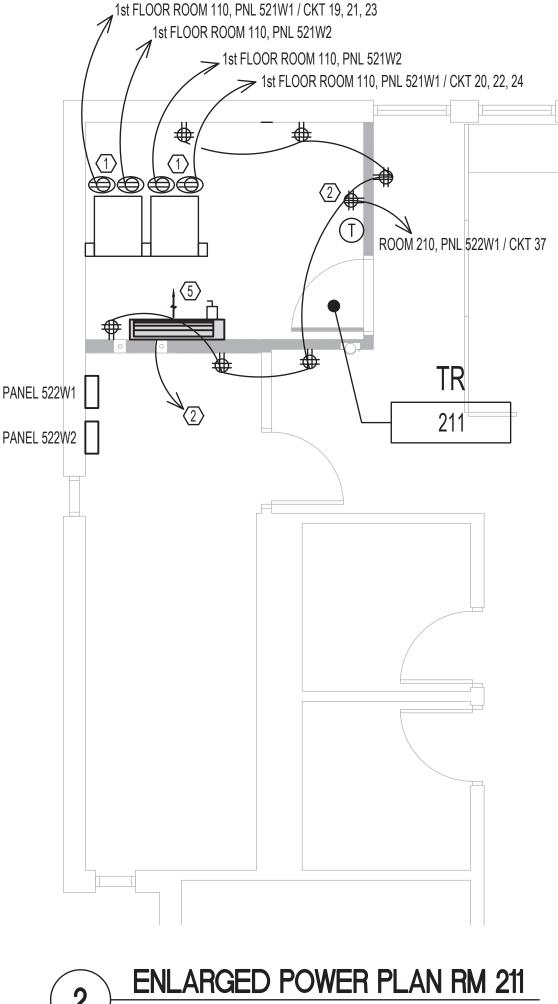


of	Drawing Title ELECTRICAL - BUILDING 52 - ENLARGED PLANS - FIRST FLOOR	Phase ISSUE FOR BID	Project Title EHRM INFRASTRUCTURE UPGRADES		Project   437- Building 52
partment rans Affairs	SHEET 178 OF 279		Location FARGO VA HE Issue Date 3/18/2022	ALTH CARE SYSTE	M Drawing El
	7 8		9		10

ENERAL NOTES	
A CENTER OR IT CLOSET. RING OR DAMAGING EQUIPMENT. D, IT COMMUNICATIONS EQUIPMENT WILL ERING" TYPE EQUIPMENT; I.E. SECURITY, ORIGINAL CLOSET, AND MUST REMAIN	A
IG WORK THAT CREATES DUST. E600 FOR UPS PANEL SCHEDULES AND	
OOM LIGHTS AND RECEPTACLES IS SHOWN OR EACH CIRCUIT IS (ROOM, PANEL AND DA BREAKER AND UPDATE PANEL CIRCUIT	
E LINE DRAWINGS. EW/RELOCATED TR CLOSETS. ELECTRICAL SETS THAT REMAIN OPERATIONAL. MUST BE PROVIDED TO THE TOP OF THE FLOORS! L21-30R, LOCKING RECEPTACLES. DETAIL ON DETAIL DRAWING E501.	В
KEY NOTES	
521W1. ND FEED IT FROM NEW PANEL 521W WITH	
GH OUTSIDE WALL, AND TRENCH WITH ORMER DISTRIBUTION PANEL BEHIND 2 <sup>ND</sup> SET OF 3/0 CABLES TO UPGRADE THE MATELY 100FT.	
ANEL TQ, REPLACE EXISTING 250A BREAKER BOTH SETS OF 3/0 CABLES TO THIS NEW 00A DISTRIBUTION PANEL 521W1.	С
30A, 3-POLE, 208V/120V CIRCUITS ON PNL ND LIGHTS. CONTRACTOR TO LOCATE ELEC. CLOSET ROOM 110, PANEL 511N1, N2	-
WER PANEL TO COOLING UNIT. INSTALL NG E501. CONTRACTOR TO WORK WITH ER AND TUBING TO OUTDOOR UNIT. PANEL 521W1.	
	D
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TURE Project Number 437-21-205 Building Number	
Drawing Number	
CARE SYSTEM <sup>ed</sup> Drawn BX EP-52-101	

	·	1	2	3	4	5	6	7	8	9	
	A									<ol> <li>USE PRECAUTIONS TO AVOID SNAG</li> <li>WHEN NEW TR ROOM(S) ARE CONS BE MOVED TO NEW TR ROOM. "BIO NURSE CALL, PHILLIPS, ETC, WILL RE</li> </ol>	GGING WIRING OR DAMAGI NSTRUCTED, IT COMMUNICA BIOENGINEERING" TYPE EQU
									E	<ul> <li>PROTECT IT EQUIPMENT FROM DUS</li> <li>SEE PANEL SCHEDULES ON DRAWIN UPS CIRCUIT NUMBERS.</li> <li>NORMAL AND EMERGENCY WIRING</li> </ul>	ING SERIES E600 FOR UPS PA
	_									CIRCUIT). CONTRACTOR TO INSTAL INDEX. G. SEE DRAWINGS ED708 AND E708 FC	ALL NEW 20A BREAKER AND FOR SINGLE LINE DRAWING
									l. J.	WORK IS NOT REQUIRED IN EXISTIN POWER TO RACKS / CABINETS IN NE RACKS / CABINETS. <u>NO POWER WIF</u> RECEPTACLES ABOVE RACKS MUST	ING IT CLOSETS THAT REMA NEW TR's MUST BE PROVIDE <u>/IRING ON FLOORS!</u> T BE NEMA L21-30R, LOCKIN
	В								K	INSTALL LIGHTING CONTROLS PER L	LIGHTING DETAIL ON DETAI
						1st F	1st FLOOR ROOM 110, PNL 521W2 1st FLOOR ROOM 110, PNL 521V 1st FLOOR ROOM 110, PI	NL 521W1 / CKT 20, 22, 24	<u>(X)</u> 1		
									2 3	POWERED FROM BOTH PANELS. 2. NORMAL POWER TO ROOM RECEPT	PTACLES AND LIGHTS.
	с							DOM 210, PNL 522W1 / CKT 37	4	5. ONLY BRANCH CIRCUIT IS SHOWN F CONDUIT AND WIRE PER DETAIL ON	FROM POWER PANEL TO CO DN DRAWING E501. CONTR
					TR 211	PANEL 522W1					
	_										
	W										
ENLARGED LUCHTING PLAN IN 21      ENLARGED POWER PLAN IN 21      ENLINE POWER PLAN IN 21      ENLINING PLAN IN 21	<b>D</b> 3/11/2022 4:56:38 P										
					AN RM 211			LAN RM 211			
Image: Consultant       ARCHITECT/ENGINEER OF RECORD       STAMP       Office of Construction and Facilities Management       Derwing Title       ELECTRICAL - BUILDING 52 - ENLARGED       Phase ISSUE FOR BID       Project Title EHRM INFRASTRUCTURE UPGRADES         State of Construction and Facilities Management	VG\EP-52-102.dwg			0 1' 2'	<u>4'</u>		1/4"=1'-0" 	2' 4' 8'			
Image: Consultant       ARCHITECT/ENGINEER OF RECORD       STAMP       Office of Construction and Facilities Management       Office of State For BID       Project Title EHRM INFRASTRUCTURE UPGRADES         Image: State For Bit State Fo	H - Drawings\WORKIN										
Image: Consultant       ARCHITECT/ENGINEER OF RECORD       STAMP       Office of Construction and Facilities Management       Office of State For BID       Project Title EHRM INFRASTRUCTURE UPGRADES         Image: State For Bit State Fo	0\400- DesDocs\402										
Image: Consultant       ARCHITECT/ENGINEER OF RECORD       STAMP       Office of Construction and Facilities Management       Derwing Title       ELECTRICAL - BUILDING 52 - ENLARGED       Phase ISSUE FOR BID       Project Title EHRM INFRASTRUCTURE UPGRADES         State of Construction and Facilities Management	05 EHRM Fargo, NE										
Image: Consultant       ARCHITECT/ENGINEER OF RECORD       STAMP       Office of Construction and Facilities Management       Office of State For BID       Project Title EHRM INFRASTRUCTURE UPGRADES         Image: State For Bit State Fo	<b>H</b> ota + lowa)\437-21-2										
Stamp       Office of Construction and Facilities Management       Office of Construction and Facilities Management       Direct Trip of 279       Phase ISSUE FOR BID       Project Title EHRM INFRASTRUCTURE UPGRADES	23 IDIQ (North Dak										<u>AN</u>
James and the second	26319D0044 VISN			CONSULTANT	ARCHITECT/ENGINFFR	OF RECORD STAMP			IADOED Phase ISSUE FOR BID	Project Title	
TARGO VATILALITICARL STS	TS\2018\18-121 36(				$n$ $\mathcal{N}$	PROFESSION	Construction and Facilities	PLANS - SECOND FLOOR			
	::\ccg_projec					Northbrook, IL 60062 T: 847.952.9362 www. bancroft-ae.com Bancroft Project No: 18-121				Issue Date	Checked Drawn





## ELECTRICAL GE

- A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WIR C. WHEN NEW TR ROOM(S) ARE CONSTRUCTED BE MOVED TO NEW TR ROOM. "BIOENGINEE NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN (
- OPERATIONAL. D. PROTECT IT EQUIPMENT FROM DUST, DURING E. SEE PANEL SCHEDULES ON DRAWING SERIES F
- UPS CIRCUIT NUMBERS. F. NORMAL AND EMERGENCY WIRING TO TR RC ON INDIVIDUAL EP DRAWINGS. NOTATION F CIRCUIT). CONTRACTOR TO INSTALL NEW 20 INDEX.
- G. SEE DRAWINGS ED708 AND E708 FOR SINGLE H. NOTE THAT KEY NOTES MAINLY APPLY TO NEV
- WORK IS NOT REQUIRED IN EXISTING IT CLOS I. POWER TO RACKS / CABINETS IN NEW TR'S M
- RACKS / CABINETS. NO POWER WIRING ON I J. RECEPTACLES ABOVE RACKS MUST BE NEMA
- K. INSTALL LIGHTING CONTROLS PER LIGHTING E

### ELECTRICAL $\langle X \rangle$ 1. POWER TO RACKS. CONTRACTOR TO SELECT

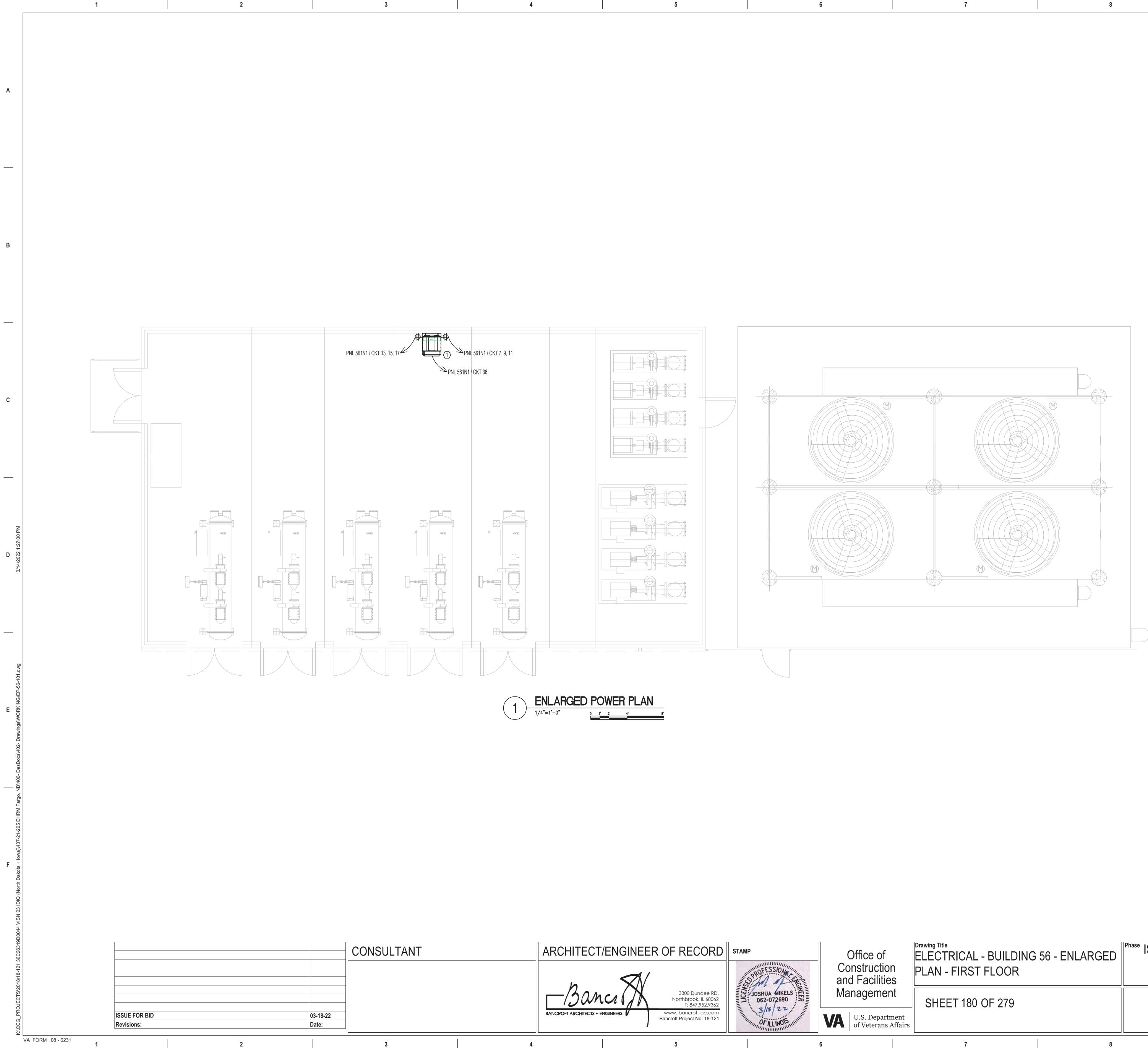
- FLOOR ROOM 110, PNL 521W1 AND 521W2 F POWERED FROM BOTH PANELS.
- 2. NORMAL POWER TO ROOM RECEPTACLES AN 3. OCCUPANCY SENSOR - HIGH MOUNT.
- 4. LIGHT FIXTURE WITH BATTERY BACK-UP.
- 5. ONLY BRANCH CIRCUIT IS SHOWN FROM POW CONDUIT AND WIRE PER DETAIL ON DRAWIN MECHANICAL CONTRACTOR TO ROUTE POWE

# 0 1' 2' 4'

Ν	
$\bigcap$	KEY PLAN
$\square$	

RD	STAMP NUMPROFESSION		Drawing Title ELECTRICAL - BUILDING 52 - ENLARGED PLANS - SECOND FLOOR	Phase ISSUE FOR BID	Project Title EHRM INFRAS UPGRADES	STRUCTL
e RD. 0062 9362 com 3-121	JOSHUA MIKELS Management		SHEET 179 OF 279		Location FARGO VA HE	EALTH CA
com 3-121	11111111111111111111111111111111111111	U.S. Department of Veterans Affairs			Issue Date 3/18/2022	Checked WG
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			ELECTRICAL GENERAL NOTES
		Α.	CONTACT VA IT PRIOR TO WORKING IN DATA CENTER OR IT CLOSET.
		В. С.	USE PRECAUTIONS TO AVOID SNAGGING WIRING OR DAMAGING EQUIPMENT. WHEN NEW TR ROOM(S) ARE CONSTRUCTED, IT COMMUNICATIONS EQUIPMENT WILL BE MOVED TO NEW TR ROOM. "BIOENGINEERING" TYPE EQUIPMENT; I.E. SECURITY, NURSE CALL, PHILLIPS, ETC, WILL REMAIN IN ORIGINAL CLOSET, AND MUST REMAIN
		D. E.	OPERATIONAL. PROTECT IT EQUIPMENT FROM DUST, DURING WORK THAT CREATES DUST. SEE PANEL SCHEDULES ON DRAWING SERIES E600 FOR UPS PANEL SCHEDULES AND
		E. F.	UPS CIRCUIT NUMBERS. NORMAL AND EMERGENCY WIRING TO TR ROOM LIGHTS AND RECEPTACLES IS SHOWN
			ON INDIVIDUAL EP DRAWINGS. NOTATION FOR EACH CIRCUIT IS (ROOM, PANEL AND CIRCUIT). CONTRACTOR TO INSTALL NEW 20A BREAKER AND UPDATE PANEL CIRCUIT INDEX.
		G. H.	SEE DRAWINGS ED708 AND E708 FOR SINGLE LINE DRAWINGS. NOTE THAT KEY NOTES MAINLY APPLY TO NEW/RELOCATED TR CLOSETS. ELECTRICAL WORK IS NOT REQUIRED IN EXISTING IT CLOSETS THAT REMAIN OPERATIONAL.
		Ι.	POWER TO RACKS / CABINETS IN NEW TR'S MUST BE PROVIDED TO THE TOP OF THE RACKS / CABINETS. <u>NO POWER WIRING ON FLOORS!</u>
		J. K.	RECEPTACLES ABOVE RACKS MUST BE NEMA L21-30R, LOCKING RECEPTACLES.
		X	ELECTRICAL KEY NOTES
		1.	POWER TO RACKS. CONTRACTOR TO SELECT 30A, 3-POLE, 208V/120V CIRCUITS IN 1st FLOOR ROOM 110, PNL 521W1 AND 521W2 FOR THE TR RACKS. EACH RACK SHOULD BE POWERED FROM BOTH PANELS
		2.	POWERED FROM BOTH PANELS. NORMAL POWER TO ROOM RECEPTACLES AND LIGHTS.
		3. 4.	OCCUPANCY SENSOR - HIGH MOUNT. LIGHT FIXTURE WITH BATTERY BACK-UP.
		5.	ONLY BRANCH CIRCUIT IS SHOWN FROM POWER PANEL TO COOLING UNIT. INSTALL CONDUIT AND WIRE PER DETAIL ON DRAWING E501. CONTRACTOR TO WORK WITH MECHANICAL CONTRACTOR TO ROUTE POWER AND TUBING TO OUTDOOR UNIT.
			KEY PLAN
ı r-	Dhaco		
RGED	<sup>Phase</sup> ISSUE FOR BI	D	Project Title EHRM INFRASTRUCTURE UPGRADES Building Number
			UPGRADES Building Number 52 Location Drawing Number
			FARGO VA HEALTH CARE SYSTEM
			3/18/2022 wg вх ЕР-52-102



### ELECTRICAL G

A. CONTACT VA IT PRIOR TO WORKING IN DATA B. USE PRECAUTIONS TO AVOID SNAGGING WI

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- C. PROTECT IT EQUIPMENT FROM DUST, DURIN
- D. NOTE THAT KEY NOTES MAINLY APPLY TO NE
- WORK IS NOT REQUIRED IN EXISTING IT CLOS E. CONNECT CONDUIT TO TOP OF 24RU ENCLO
- CABLE INSIDE BACK OF ENCLOSURE, AND TEF CONNECTOR, FOR UPS TO PLUG INTO.

# ELECTRICAL CO

1. CONTRACTOR TO TERMINATE FROM 120V P 1-POLE, L5-30 120V CIRCUIT TO THE UPS INSI 2#10 & 1#8G, ¾ IN C, CABLE FROM NORMAL WALL CABINET. THERE IS NO SPACE FOR CO CONDUCTOR MUST BE A CABLE WITH A LOCK



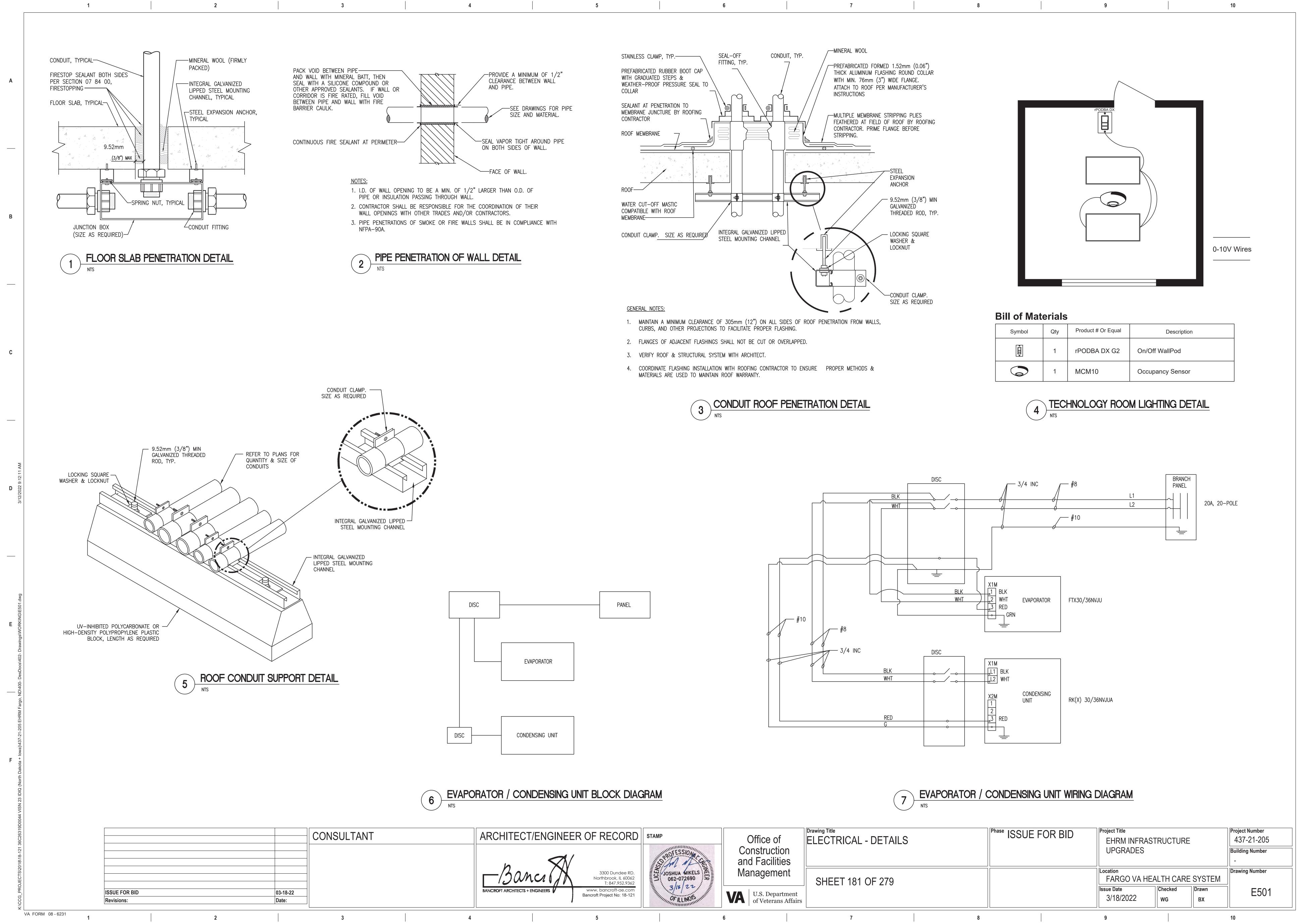
of	Drawing Title ELECTRICAL - BUILDII PLAN - FIRST FLOOR	NG 56 - ENLA	RGED	Phase ISSUE FO	OR BID	Project Title EHRM INFRAST UPGRADES	FRUCTL
ment epartment erans Affairs	SHEET 180 OF 279					Location FARGO VA HEA Issue Date 3/18/2022	ALTH CA
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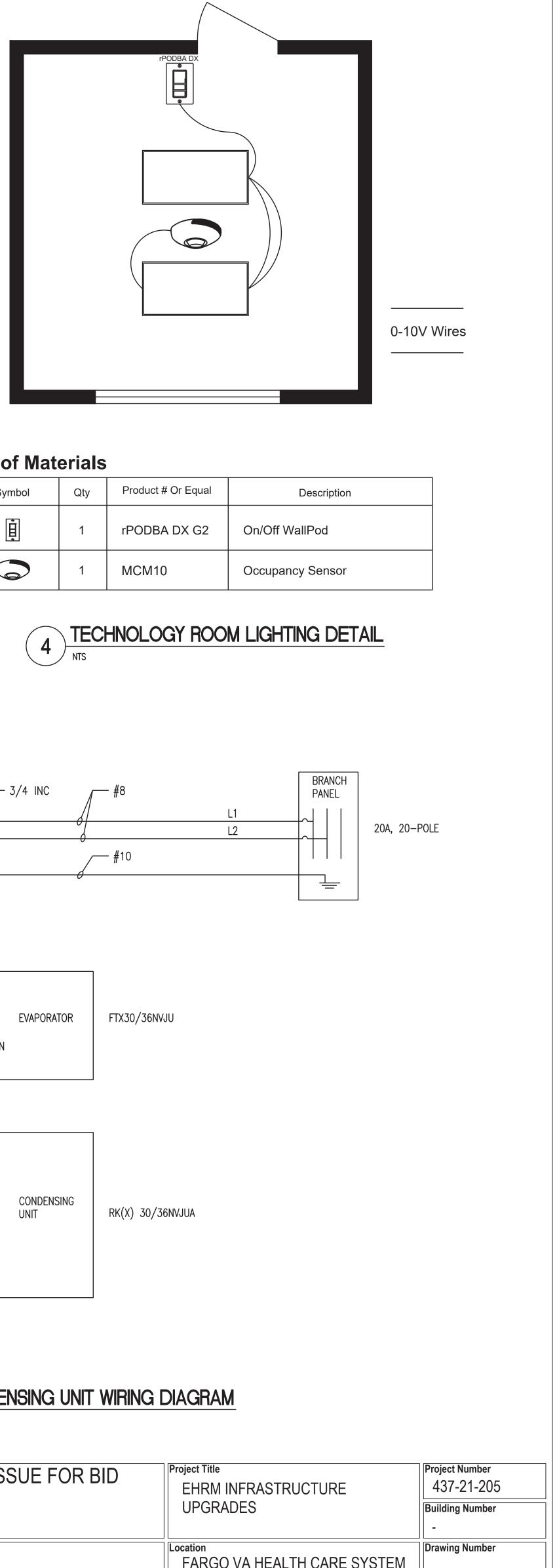
SENERAL NOTES	
TA CENTER OR IT CLOSET. /IRING OR DAMAGING EQUIPMENT. ING WORK THAT CREATES DUST. NEW/RELOCATED TR CLOSETS. ELECTRICAL OSETS THAT REMAIN OPERATIONAL. OSURE, AND ROUT MULTICONDUCTOR ERMINATE WITH L5-20 LOCKING	A
OMMON NOTES	
POWER PANEL 561N1. CONNECT ONE 30A, ISIDE THE WALL MOUNTED CABINET. USE AL POWER PANEL 561N1 TO PLUG INSIDE CONDUIT INSIDE THE CABINET, SO ICKING PLUG TO REACH THE UPS.	В
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CTURE Project Number 437-21-205 Building Number 56	
CARE SYSTEM	

EP-56-101

Drawn

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Symbol	Qty	Product # Or Equal	Desc
•	1	rPODBA DX G2	On/Off WallPo
	1	MCM10	Occupancy Se

-	Drawing Title ELECTRICAL - DETAILS		Phase ISSUE F	OR BID	Project Title EHRM INFRAS UPGRADES	TRUCT
epartment erans Affairs	SHEET 181 OF 279				Location FARGO VA HE Issue Date 3/18/2022	ALTH C/ Checked WG
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ELECTRICAL PANEL SCHEDULE OR VA APPROVED EQUAL											
EQUIPMENT TAG	SINGLE LINE DWG	PANEL SCHEDULE	ELECTRIC CLOSET	VOLTS	Ļ	MPS	NEUTRAL	POLES	SHORT CIRCUIT RATING	BASIS OF DESIGN	NOTES
					BUS	MAIN			KAISC		
											THERMAL MAGNETIC WITH 48V DC SHUNT
400A ENCLOSED BRKR	E707	N/A	BC 50A UPS	208/120V		400	N/A	3	14	EATOM	TRIP FROM UPS
EBUPS461NA	E707	E602	1B-121	208/120V	150	150	200%	42	14	EATON	
EBUPS011CB	E707	E602	1D-01	208/120V	150	150	200%	42	14	EATON	
EBUPS092NA	E707	E602	2B-32	208/120V	150	150	200%	42	14	EATON	
EBUPS012CB	E707	E602	2C-91	208/120V	150	150	200%	42	14	EATON	
EBUPS463CA	E707	E602	3C-38	208/120V	150	150	200%	42	14	EATON	
EBUPS014CA	E707	E602	4D-06	208/120V	250	250	200%	60	14	EATON	
EBUPS095CA	E707	E602	PENTHOUSE A	208/120V	150	150	200%	42	14	EATON	
EBUPS401WA	E707	E602	BLDG 40, RM 102B	208/120V	150	150	200%	42	14	EATON	
521W1	N/A	N/A	BLDG 52,RM 111	208/120V	225	225	100%	30		EATON	NEW 225A PANEL TO INCREASE QUANTITY OF CIRCUITS
SPD	N/A	N/A	BLDG 51, RM 1030	208/120V			N/A	3	N/A	EATON	100KA, SCR (L-N + L-G), TYPE 1 AND 2 UL RATED
											DISCONNECT AT EACH EVAPORATOR AND CONDENSING UNIT. NEMA 3R FOR OUTDOOR
2-POLE DISCONNECTS	N/A	N/A	IN TR ROOMS	208/120V	N/A	20A	N/A	2	14	EATON	LOCATIONS

UPS A SYSTEM SCHEDULE									
EQUIPMENT TAG	QUANTITY	KW, A	VOLTAGE	EFFICIENC Y	UPS BATTERY UPTIME	CAT. NO.	KAISC	BASIS OF DESIGN	NOTES
UPS MODULE	1	200 KW, CONFIGURED AS 90KW	208V, 4-W IN 208V, 4-W OUT	99% <u>w</u> ESS	14 MIN. AT 90KW INITIALLY	9GK618A029A0 0 93PM UPS 20	l 65kaic	EATON	INCLUDE FACTORY TEST REPORT, FIELD STARTUP AND FIELD LOAD BANK TEST, ONE YEAR WARANTEE ON MODULE #1, CONFIGURE TO 200KW IN 2ND YEAR WHEN MORE POWER IS AVAILABLE FROM NEW EM GEN 9.
UPS MODULE	2	200 KW	208V, 4-W IN 208V, 4-W OUT	99% <u>w</u> ESS	14 MIN.	9GK618A029A0 0 93PM UPS 20	65kaic	EATON	TWO YEAR WARANTEE ON MODULE #2, BECAUSE IT WILL SIT DE-ENERGIZED FOR 1ST YEAR, INCLUDE FACTORY TEST REPORT, FIELD STARTUP AND FIELD LOAD BANK TEST IN 2ND YEAR.
BATTERY CABINET	1	50 KW HR	452 A DC	N/A	14 MIN.	9PZTJBE39010 93PM IBC-LV	Ι Ν/Δ	EATON	VRL BATTERY, 14 MIN. INITIAL, AND 10 MIN AT END OF BATTERY LIFE AT 90KW. NOTE THAT REMAINING BATTERIES WILL BE PURCHASED WHEN UPS #2 IS ENERGIZED. NOTE THAT YEAR 2 BATTERIES SHOULD BE ON BATTERY RACK TO FIT IN 2 HR FIRE RATED ROOM.
TIE BOARD	1	1600A	208V	N/A	N/A	DCCG-2111-10	65kaic	EATON	208Y / 120V, 3 PH, 4 W
ENCLOSED BREAKER	1	400A	208V	N/A	N/A	N/A	65kaic	EATON	WITH 48VDC SHUNT TRIP FROM UPS
BYPASS BREAKER (MBP) BOARD	1	1600A	208V	N/A	N/A		65kaic	EATON	208Y / 120V, 3 PH, 4 W. 2-KEY INTERLOCK BETWEEN MIS/MBP BREAKERS WITH SOLENOID KEY RELEASE UNIT & INDICATOR LAMP, MAKE BEFORE BREAK.
MOB / MIS BOARD	1	1600A	208V	N/A	N/A		65kaic	EATON	700A MOB1, MOB2 AND 1600A MIS BREAKERS
EBUPS DSWBD BOARD	1	1600A	208V	N/A	N/A		65kaic	EATON	BREAKERS MUST BE MCCB PXR200 TO PROVIDE METERING CAPABILITY.
EQUIPMENT STANDS	ONE STAND F	OR EACH COMP	PONENT					EATON	STEEL BLACK POWDER COATED
RAISED FLOOR STANDS	AS NEEDED CONTRACTOR TO PURCHASE REQUIRED NUMBER OF STANDS AND TILES TO MAINTAIN A COMPLETE ASM MC 125 COMPONENTS								MUST BE ASM MC 125 COMPONENTS
RAISED FLOOR NOTE	IN AREAS WHERE RAISED FLOOR IS CUT TO ACCOMMODATE NEW EQUIPMENT. AND IN AREAS OF REMOVED EQUIPMENT. CONTRACTOR TO INSTALL PROPER NUMBER OF								

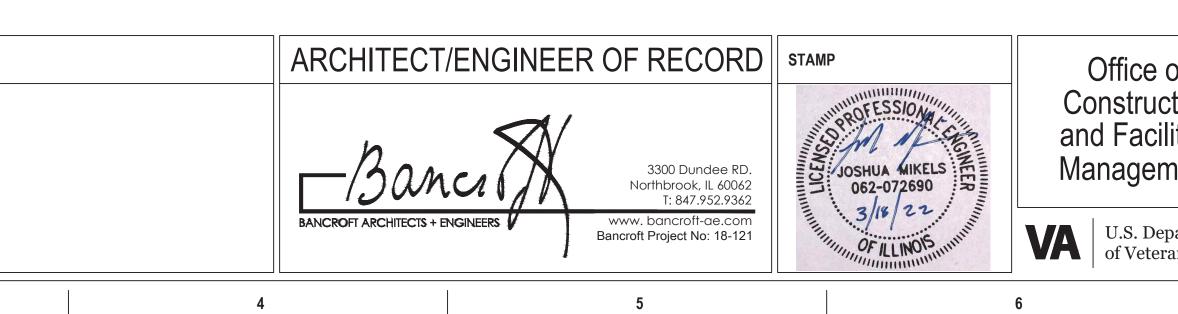
CONSU	LTAN
03-18-22	
Date:	

VA FORM 08 - 6231

1

ТҮРЕ	DESCRIPTION
CLX	4' STRIP LIGHT
CLX	4' STRIP LIGHT
GENERAL	NOTES:
1. FOR EXA	ACT LOCATIONS (
2. LAMP T	YPE DESIGNATIO
3. VERIFY	AND COORDINA
4. SEE nLig	ht DETAIL FOR P
5. LAMPS I	FOR ALL FIXTURE
6. FOLLOV	V ADDITIONAL G

		ACCUITY / LITHONIA LIGHT SWIT
ITEM	DESCRIPTION	FUNCTION
N/A	SWITCH - S	ON\OFF, WALL POD
NI / A	OCCUPANCY	CEILING OCCUPANCY SENSOR, HIGH MOUNT
N/A	SENSOR	CEILING OCCUPANCY SENSOR, HIGH MOUNT



e of	Drawing Title ELECTRICAL - EQUIPI LIGHTING FIXTURE SO	)	Phase ISSUE F	OR BID	Project Title EHRM INFRA UPGRADES	STRUC <sup>-</sup>
ement	SHEET 182 OF 279				Location FARGO VA H	EALTH
Department eterans Affairs					Issue Date 3/18/2022	Checke WG
	7	8			9	

### ACCUITY / LITHONIA LIGHT SWITCHES AND SENSORS BASIS OF DESIGN OR VA APPROVED EQUAL CATALOG NUMBER FUNCTION

OF ALL LIGHTING FIXTURES REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS.	
ONS FOLLOW NEMA DESIGNATION GUIDELINES. VERIFY AND COORDINATE REQUIRED TRIM KITS, MOUNTING.	
ATE REQUIRED TRIM KITS, AND MOUNTING.	
POWER AND CONTROL WIRING.	
ES SHALL HAVE THE SAME COLOR TEMPERATURE PER SPECIFICATIONS.	
GENERAL AND KEY NOTES ON LIGHTING DRAWINGS.	

34

34

WATTS VOLTS

MOUNTING

MVOLT SUSPENDED

MVOLT SUSPENDED

nPODMA DX

nCM PDT 9 RJB

REMARKS

NOTES

### LIGHTING FIXTURE SCHEDULE - BASIS OF DESIGN OR VA APPROVE EQUAL LIGHTING FIXTURE LAMPS FIXTURE

TYPE

LED

LED

**CATALOG NUMBER** 

**BASIS OF DESIGN** 

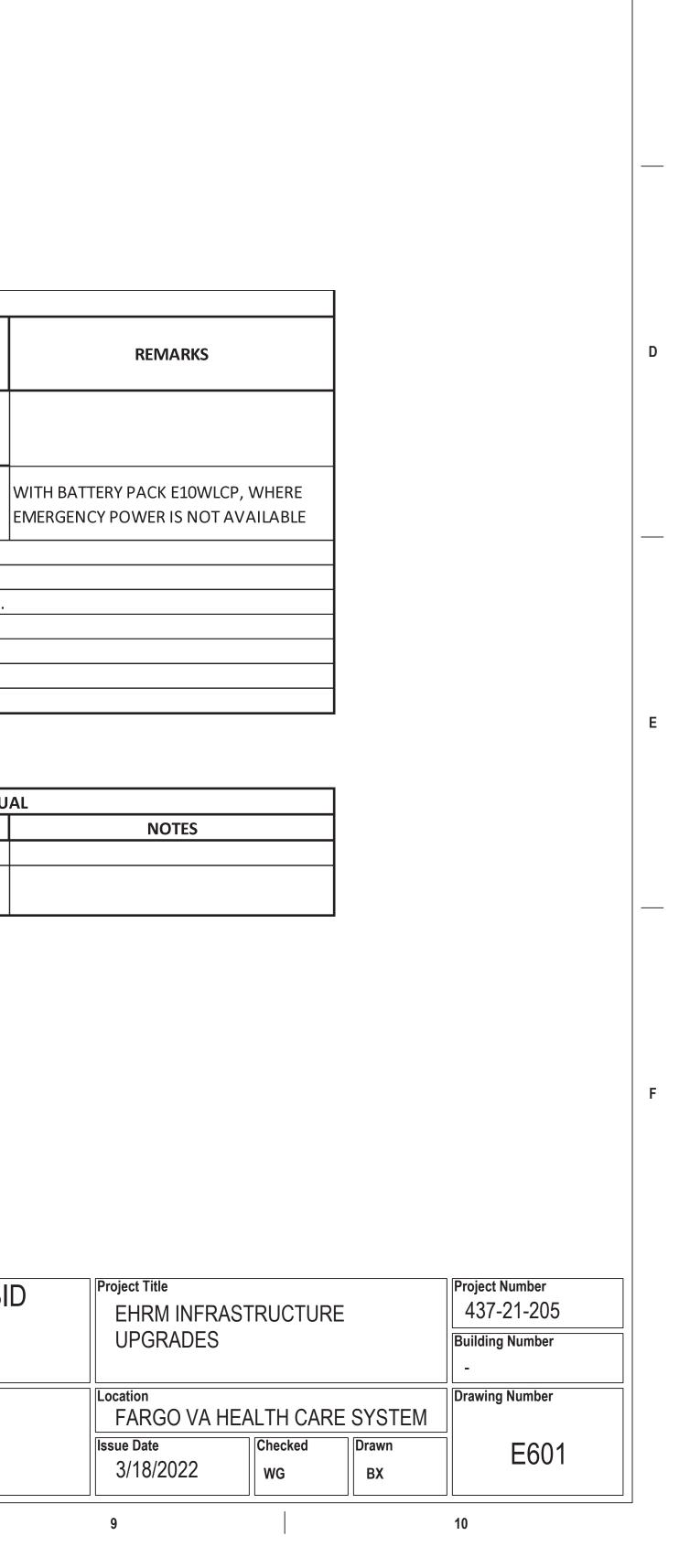
MANUFACTURER

LITHONIA LIGHTING OR CLX L48 5000LM SEF FDL

LITHONIA LIGHTING OR CLX L48 5000LM SEF FDL

VA APPROVED EQUAL MVOLT GZ10 40K 80CRI WH

VA APPROVED EQUAL MVOLT GZ10 40K 80CRI WH



	-	EBUP	PANEL NA PS DSWBI			LOCATION M BC 50A			MOUN FLC	NTING DOR		SUPP PART			120	VOLTAC 0/208V. 3F		BUS 1600	
	-	NO	_OAD DESC	RIPTION	PHA	VA LOAD PH B	PHC	CODE		CB	A E	BUS	с т	CB R P		PH A	VA LOAD PH B	PH C	LOA
	-	1 3 5	DATA CENT	BUS A	48000	48000	48000	E E E	3	400		×	—   3 ←   3	30 3	E E E	1200	1200	1200	
	-	7 9 11	PNL UPS BL	_DG 40	7200	7200	7200	E	3	100	- <del>*</del>	×	_ 3	30 3		1200	1200	1200	
	-	13	BA-30 RACK	(1	1200	1200	7200	E E E	3	30		×	- 3	80 3	E E E	1200	1200	1200	
	-	17 19 21 E	BA-30 RACK	(2	1200	1200	1200	E E E	3	30			★   	80 3	E E E	1200	1200	1200	
	-	23 25			1200		1200	E					<del>~</del>		E	9600	)	1200	
	-	27 E 29 31	3B-92 RACK	(1	1200	1200	1200	E E E	3	30		*	- 1: *	50 3	E E E	12000	9600	9600	
	-		3B-92 RACK	(2	1200	1200	1200	E E	3	30		*	—   1: <del>K-</del>	50 3		12000	12000	12000	
	-	37 39 41	BC-02 RACK	<1	1200	1200	1200	E E	3	30	*	*	—   —   1: <del>×</del> _	50 3	E E E	10800	10800	10800	
		43 45 E	BC-02 RACK	<2	1200	1200		E E	3	30		*	- 1	50 3	E	9600	9600		
		47 49 51 E	3D-02 RACK	(1	1200	1200	1200	E E E	3	30	×		←    1;	50 3	E E E	10800	10800	9600	
		53 55			1200	1200	1200	E					←		E	14400	10000	10800	
		59	3D-02 RACK		00	1200 NNECTED	1200	E	3 DE	30 MAND			←	50 3 DS	E		14400	14400	
	-	LIGHTIN				(KVA) 0.1	D.F. 1.00			(KVA) 0.1	LIGH	TING	(K	VA) D.1	CONNE PH A	ECTED		VA 136800	
	-		PT (FIRST 10 PT (REMAINI RS			0.2 0.0 0.3	0.50			0.0	RECI MOT	ORS	(	0.2 0.3 0.4	PH B PH C			136800 136800	
	-	LARGE	ST MOTOR MENT			0.0 410.8	1.25 1.00			0.0 410.8	HEA			0.5		ECTED		KVA 410.4	ŀ
	-	HEATIN TOTAL	IG			0.5 411.9				0.5 411.9					DEMA			411.9	
			)UND LATE	BUS D GROUND E	BUS								BUS BUS					ISC =	INTEGR 14KAIC
		L R	LIGHTING				MOTORS	мото	R			E		EQUI HEAT	PMENT ING			S T	SUBFE
	L	-					1			• • • • • • • • • • • • • • • • • • •	I_		1			\			
		CKT .	PANEL NA EBUPS401	IWA		LOCATION DOM 40 10 VA LOAD	)2B		SUR	NTING FACE CB		SUPPL		ROM CB	120/	VOLTAG (208V. 3P		BUS	1
		NO L	OAD DESC		PH A 1200	PH B	PHC	CODE	E P	TR		B C	TR -	P	CODE E	PH A 1200	PHB	PHC	LOAD DE
		3 4 5 7	0 102B RAC	CK1	1200	1200	1200	E E E	3	30		* *	- 30 	3	E E	1200	1200	1200	
		9 4 11	0 102B RAC	СКЗ		1200	1200	E	3	30		×     ×	- 30	3	E E		1200	1200	
	-	13 15 17	0 204C RAC	CK1	1200	1200	1200	E E E	3	30	*	×	-  30 -  30	3	E E E	1200	1200	1200	
		19 21 S	SPARE				1200		3	30		×	- 30	3				1200	
	-	23 25 27 S	SPARE						3	30	*	+ * *	- - - 30	3					
		29 31 S	PACE								 	×	-						
	-	35 S	SPACE SPACE SPACE						_			×   ×	-						
	-	39 S	SPACE SPACE						_			×     ×	_						
AM	-	LOAD E		)N	CC	NNECTED (KVA) 0.0	D.F.			MAND (KVA) 0.0			LOAE (KV	A)	CONNEC	CTED		VA 7200	
9:13:23 /		RECEP RECEP	T (FIRST 10 T (REMAINE	/		0.0	1.00	)		0.0	REC	EPT	0.0	0	PH B PH C			7200 7200 7200	
2707/71/2	-		ST MOTOR			0.0 0.0 21.6	1.25	5			EQUI HEA <sup>-</sup>		0.		TOTAL CONNE	CTED		KVA 21.6	
3/12		HEATIN				0.0	1.00			21.0 0 21.6					DEMAN	ND		21.6	
			GROUND ISOLATE	BUS D GROUND B	US							EUTRAL EUTRAL						ISC =	INTEGRA
	-					1													
	-	R	LIGHTING RECEPT/			M LM	MOTORS LARGES		R			E H		EQUIP HEATII	MENT NG			S T	SUBFED TRANSF
	1	PA			LOCAT		M	IOUNTI	NG	s		ED FRO	M		VOLTA	GE	BUS	1	MAIN
		EBU	UPS463C	A	ROOM 3	C-38		SURFAC CB		BU				120	)/208V. 3		150A		0A. 3P. M
ß	- - -	NO L	OAD DESC	PH / 120	A PHE	3 PH (	E	P T				TR	Ρ (	E	PH A 1200	PH B	PHC		
E0UZ.a/	-	3 3 5 7	D 10 RACK	120	1200 0	1200	0 <u>E</u> E	3 3		×	X	30	3	E E E	1200	1200	1200	3D	10 RACI
SNING/	-	11	D 10 RACK	(3	1200	) 120(	E 0 E	3 3	0	X	X	30	3	E E	1000	1200	1200	3D	10 RACI
		13 15 17	B 23 RACK	( 5	0 1200	) 120(	E E 0 E	3 3		×	X	30	3	E E E	1200	1200	1200	3B	23 RACI
EMRIN Fargo, NU/400- Desuocs/402- Urawings/WURNING/E002.0wg		19 21 3	B 23 RACK	120	0 1200	)	E	3 3	0	<		30	3	E E	1200	1200		3B :	23 RACK
0CS/4UZ		23 25 27 3	B 23 RACK	120 ( 4	0 1200	120	0 E E E	3 3	0	<  x	X	30	3	E			1200		SPA
		29 31				1200				<									SPA
ND/400		35	SPARE SPACE					3 3			X								SPA SPA SPA
i rargo,		39 S	SPACE SPACE							×	×		-						SPA SPA
		LOAD D	DESCRIPTIC	DN	,	/A) [	D.F.	DEMAN (KV) 0	A)	SUE	IG	OADS (KVA) 0.0			ECTED		VA 10800		
207-17-1		RECEP RECEP	T (FIRST 10 T (REMAINI			0.0 1 0.0 C	1.00 0.50	0	).0 F	RECEP 10TOR	Т	0.0		PH B PH C			10800 10800 10800	)	
CUZ-1Z-164/(BW01 +		MOTOR LARGE EQUIPN	ST MOTOR			0.0 1	1.00 1.25 1.00		).0 ⊢	EQUIP IEATIN	G	0.0			IECTED		KVA 32.4		AM 8
		HEATIN TOTAL					.00	32	0					DEMA	AND .		32.4		8
בט וטוע (ואטו ווו טמגטוב			GROUND ISOLATE	BUS D GROUND B	US						itral e Itral e						ISC =		AL TVSS 4KAIC
201 22 IDIG	-	L R	LIGHTING RECEPT/		M LM	MOTO LARGE	RS EST MOTO	R			E H		QUIPM				S T	SUBFEI TRANSF	D FORMER
90044 VISIN																			
200202 1900																C	ONSL	JLTA	NT
01070																			
0000 R0018018/18-121				SSUE FOR B evisions:	ID									03-′ Dat	18-22 e:				
=	1		L		_	_					_		_			'I			

1

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С

2

VA FORM 08 - 6231

1

LOAD DESCRIPTION	
	CKT
	NO
	2
BD-02 RACK3	4
	6
	8
BD-02 RACK4	10
	12
	14
BD-84 RACK1	16
	18
	20
BD-84 RACK2	22
	24
	26
PNL UPS 1A	28
	30
	32
PNL UPS 1B	34
	36
	38
PNL UPS 2A	40
	42
	44
PNL UPS 2B	46
	48
	50
PNL UPS 3A	52
	54
	56
PNL UPS 4A	58
	60

4

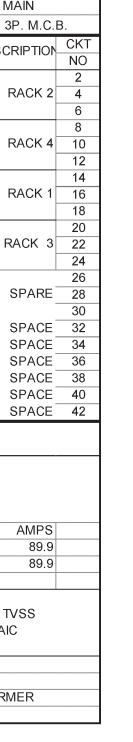
3

BFED RANSFORMER

MAIN												
1,600A. 3P. M.C.B.												
D DESCRIPTION CKT												
	NO											
	2											
40 102B RACK2	4											
	6											
	8											
40 102B RACK4	10											
	12											
	14											
40 204C RACK2	16											
	18											
	20											
SPARE	22											
	24											
	26											
SPARE	28											
	30											
SPACE	32											
SPACE	34											
SPACE	36											
SPACE	38											
SPACE	40											
SPACE	42											
AMPS												
-												
60.0 60.0												
60.0												

TEGRAL TVSS 14KAIC

BFED	
NSFORMER	



F	PANEL NAME		LOCATION		1	MOUN	TING		SU	PPLI	ED FR	DM		VOLTAG	E	BUS	
E	3UPS461NA	R	OOM 1B 12	21		SURF	ACE						120	/208V. 3P	H, 4W	150A	
СКТ	LOAD DESCRIPTION		VA LOAD			C	ЭВ		BUS		CI	3			VA LOAD		_LO/
NO		PHA	PH B	PHC	CODE	Р	TR	A	B	С	TR	Р	CODE	PH A	PH B	PH C	
1		1200			E			-*					E	1200			
3	1A-54 RACK 1		1200		E	3	30		<u>    ×    </u>		30	3	E		1200		
5				1200	E					- <del>X</del> -			E			1200	
7		1200			E			<b>├</b> ₩					E	1200			
9	1A-54 RACK 3		1200		E	3	30		<u>    ×    </u>		30	3	E		1200		
11				1200	E					-			E			1200	
13		1200			E			+					E	1200			
15	1A-54 RACK 5		1200		E	3	30		<u> </u>		30	3	E		1200		
17				1200	E					- <del>X</del> -			E			1200	
19		1200			E			+		_			E	1200			
21	1A-54 RACK 6		1200		E	3	30		<u> </u>	—	30	3	E		1200		
23				1200	E					-			E			1200	
25								+		_							
27	SPARE					3	30		<u>    ×     </u>	_	30	3					
29										-							
31	BLANK							┝╫		_							<u> </u>
33	BLANK								<u> </u>								
35	BLANK							1		- <u>×</u> -							
37	BLANK																
39	BLANK								×								
41	BLANK									×							
LOAD D	ESCRIPTION	CO	NNECTED			DE	MAND	1	SUBF	-ED I	OADS		CONNE	CTED		VA	4
	0		(KVA)	D.F.			(KVA)			<u>,                                     </u>	(KVA)					000	
LIGHTIN			0.0	1.00 1.00			0.0		GHTING ECEPT	,	0.0		PH A PH B			960 960	
	T (FIRST 10 KW)		0.0 0.0	0.50			0.0		DTORS		0.0		PHB			960	_
MOTOR	T (REMAINDER)		0.0	1.00			0.0				0.0		РПС			900	0
	ST MOTOR		0.0	1.00			0.0		EATING		0.0		TOTAL			KV	<u>م</u>
EQUIPM			28.8	1.20	1		28.8		ATING		0.0		CONNE			28.	
HEATIN			0.0				20.0						DEMA			28.	
TOTAL			28.8				28.8						DENIA			20.	
	GROUND BUS ISOLATED GROU	ND BUS	20.0		<u> </u>		10	0% N	IEUTR/ IEUTR/							ISC =	INT
	LIGHTING		М	MOTORS					E		EO		ENT			S	SU
L		I	IVI							-						0	

5

6

T TRANSFORMER

PANEL NAME	AME LOCATION MOUNTIN				TING	G SUPPLIED FROM						VOLTAC	E	BUS	MAIN		
EBUPS014CA	F	ROOM 4D-0	6	S	URF/	ACE			PD	U A		12	20/208V. 3F	PH, 4W	250	250	
СКТ		VA LOAD				В		BUS		CB				VA LOAD			СКТ
NO LOAD DESCRIPTION	PHA	PHB	PHC	CODE	P	TR	Α	B	С	TR		CODE	PHA	PHB	PHC	LOAD DESCRIPTION	NO
1	1200	1110	1110	E	·		_ <u>x</u> _		Ť		<u> </u>	E	1200	1110	1110		2
3 4B 23 RACK 1	1200	1200		E	3	30	1			30	3	E	1200	1200		4B 23 RACK 2	4
5		1200	1200	E	-							E		1200	1200		6
7	1200		1200	E		$\left  \right $					<u> </u>	E	1200		1200		8
· · · · · · · · · · · · · · · · · · ·	1200	1000		E	3	30	$\uparrow$			30	3		1200	1200		4E 15 RACK 1	10
		1200	1000		3	30		$\frown$		30	3	E		1200	4000	4E IS RACK I	
11			1200	E					$\uparrow$			E	1000		1200		12
13	1200			E			- <u>*</u> -		+			E	1200			PENTHOUSE TR 501	14
15 4E 15 RACK 2		1200		E	3	30		<u> </u>		30	3	E		1200		RACK 1	16
17			1200	E					*			E			1200		18
19 PENTHOUSE TR 502	1200			E			-*-		+			E	1200				20
21		1200		E	3	30	_	<del>- *</del>	+	30	3	E		1200		4B 23 RACK 4	22
21 RACK 1			1200	E	1				-*-			E			1200		24
25	1200			E			<u> </u>					E	1200				26
27 PENTHOUSE IR 503		1200		E	3	30		_ <u>*</u> _	-	30	3	E		1200		PENTHOUSE TR 503	28
29 RACK 1		1200	1200	E	-			<u> </u>			-	E		1200	1200	RACK 2	30
31 DENTHOUSE TO 500	1200		1200	E								E	1200		1200		32
	1200	1000			2	20	$\uparrow$			30	2		1200	1000		PENTHOUSE TR 503	
33 RACK 3		1200	1000	E	3	30				30	3	E		1200	1000	RACK 4	34
35			1200	E					+			E			1200		36
37							-*-						_				38
39 SPARE					3	30		-*-	+	30	3					SPARE	40
41							_		-*-								42
43 SPACE					1	20	<del>- X</del> -		+	20	1					SPACE	44
45 SPACE					1	20		_*_		20	1	1				SPACE	46
47 SPACE					1	20			<u>*</u>	20	1	1				SPACE	48
49 SPACE					1	20	<u> </u>			20	1	-				SPACE	50
51 SPACE					1	20		_ <u>*</u>		20	1	-				SPACE	52
53 SPACE					1	20				20	1	-				SPACE	54
55 SPACE					1	20				20	1					SPACE	56
					1		$\uparrow$	↓ ↓				-					
57 SPACE						20		$\uparrow$		20	1					SPACE	58
59 SPACE					1	20			+	20	1					SPACE	60
LOAD DESCRIPTION	CC	NNECTED				IAND		SUBFE		OADS		CONN	ECTED		VA		
		(KVA)			(	KVA)				(KVA)							
LIGHTING		0.1	1.00			0.1		HTING		0.1		PHA			14400		
RECEPT (FIRST 10 KW)		0.2	1.00			0.2	RE	CEPT		0.2		PHE	3		14400		
RECEPT (REMAINDER)		0.0	0.50			0.0	MO	TORS		0.3		PHC	;		14400		
MOTORS	1	0.3	1.00			0.3	EQ	UIP		0.4							
LARGEST MOTOR		0.0	1.25			0.0		ATING	i	0.5		ΤΟΤΑΙ	_		KVA	AMPS	
EQUIPMENT		43.6	1.00			43.6				3.0			- NECTED		43.2		
HEATING						0.5						DEM			44.7		
TOTAL		44.7	1.00			44.7						DES				127.1	
		44./															
JND BUS						I	BUS						INTEGRAL TVSS				
ATED GROUND	BUS									BUS					ISC =	14KAIC	
ATED GROUND	, 500								L	500					100 -		
L LIGHTING		M	MOTORS					E		ΕQ	UIPI	MENT			S	SUBFED	
								<u> </u>									

L	LIGHTING							0	SUBFED
R	RECEPTACLE	LM LARGEST	MOTOR	H	HEATING	G		Т	TRANSFORMER
	PANEL NAME	LOCATION	MOUNTING	SUPPLIE	D FROM		VOLTAGE	BUS	MAIN
	EBUPS092NA	ROOM 2B 32	SURFACE			120	0/208V. 3PH, 4W	150A	150A. 3P. N
CKT	LOAD DESCRIPTION	VA LOAD	CB	BUS	CB		VA LOAD		LOAD DESCRIPTION
NO									

CKT LOAD DESCRIPTION		VA LOAD			C	В	BU	S		зв			VA LOAD		LOAD DESCRIPTION
NO LOAD DESCRIPTION	PH A	PH B	PH C	CODE	P	TR	A B	C	TR	P	CODE	PHA	PHB	PH C	
1	1200			E			- <del>X</del> -		-		E	1200			
3 2A 24 RACK 1		1200		E	3	30	<b>⊢   ×</b>		- 30	3	E		1200		2A 24
5			1200	E	1			<u> </u>	-		E			1200	8
7	1200			E							E	1200			
9 2A 24 RACK 3	1200	1200		E	3	30			- 30	3	E	1200	1200		2A 24
11		1200	1200	E		00	l i r				E		1200	1200	
	4000		1200					<u> </u>	-	-		1000		1200	
13	1200			E		~~			-		E	1200			
15 2A 24 RACK 5		1200		E	3	30	<u> </u>		-   30	3	E		1200		2C 33
17			1200	E				—×	-		E			1200	
19	1200			E			<del>  X  </del>		-		E	1200			
21 2C 33 RACK 1		1200		E	3	30	<u> </u>		- 30	3	E		1200		2C 33
23			1200	E	1			— X	-		E			1200	
25	1200			E											
27 2A 24 RACK 6		1200		E	3	30	<u> </u>		- 30	3					
29			1200	E	1			x	-						
31 SPACE			1200	<b>Ŀ</b>											
33 SPACE									_						
35 SPACE									-						1
37 SPACE									-						
39 SPACE							X		-						
41 SPACE								X	-						
LOAD DESCRIPTION	CO	NNECTED			DEM	IAND	SUB	FED L	.OADS	6		IECTED		VA	
LOAD DESCRIPTION		(KVA)	D.F.		(	KVA)			(KV	'A)	CONN			٧A	
LIGHTING		0.0	1.00			0.0		IG	0.0	)	PH A	4		10800	
RECEPT (FIRST 10 KW)		0.0	1.00			0.0		Т	0.0		PHE			10800	
RECEPT (REMAINDER)		0.0	0.50				MOTOF		0.0		PHO			10800	
MOTORS		0.0	1.00			0.0			0.0			<i>,</i>		10000	]
LARGEST MOTOR		0.0	1.00			0.0		<u> </u>	0.0		ΤΟΤΑ			KVA	
								G	0.0						
EQUIPMENT		32.4	1.00			32.4						INECTED		32.4	
HEATING		0.0	1.00			0						1AND		32.4	
TOTAL		32.4				32.4					DES	IGN			
GROUND BUS ISOLATED GROUND	BUS						00% NEU 00% NEU							ISC =	INTEGRAL TVSS 14KAIC
L LIGHTING		M	MOTORS					E		FOU	IPMEN	Т		S	SUBFED
R RECEPTACLE			LARGEST		2			<u> </u>		HEA		•			TRANSFORMER
IN INCOLFINGE			LANGLUI		<b>`</b>						IING			I	
	FCT							חמ	   ст	AMF	)				0.5
ARCHIT		5		.R U	3	3300 E	Dundee F	D.	51	CENSEN	DPROF JOSH	ESSION			Office of Construct and Facilit Managem
	an				Nor		ok, IL 600 47.952.93		IIII		06	2-072690	R		

www. bancroft-ae.com Bancroft Project No: 18-121

BANCROFT ARCHITECTS + ENGINEERS

4

1000	PENTHOUSE TR 503         26           RACK 2         28		25 27				×	-					-
1200	30           PENTHOUSE TR 503         32           RACK 4         34		29 31 33				* *	-					
1200	36 38 SPARE 40		35 37 39 SPARE			3 30 -	× ×	- - - 30 3					SPARE
	42 SPACE 44		41 43 SPACE			1 20 -	×	- <u>20</u> 1					- SPACE
	SPACE 46 SPACE 48 SPACE 50		45 SPACE 47 SPACE			1 20 — 1 20 —		- 20 1 - 20 1					SPACE SPACE
	SPACE 50 SPACE 52 SPACE 54		49 SPACE 51 SPACE 53 SPACE			1 20 - 1 20 - 1 20 -		- 20 1 - 20 1 - 20 1					SPACE SPACE SPACE
	SPACE 56 SPACE 58		55 SPACE 57 SPACE				× ×	- 20 1 - 20 1 - 20 1					SPACE SPACE SPACE
VA	SPACE 60		59 SPACE	CONNECTED	DI		SUBFED I	- 20 1		CTED	VA		SPACE
14400			LIGHTING	(KVA) D.F. 0.1 1.00	) 	(KVA) 0.1	LIGHTING	(KVA) 0.1	PHA		8400		
14400 14400			RECEPT (FIRST 10 KW) RECEPT (REMAINDER)	0.2 1.00	)	0.0	RECEPT MOTORS	0.2	PH B PH C		8400 8400		
KVA 43.2			MOTORS LARGEST MOTOR EQUIPMENT	0.3 1.00 0.0 1.25 25.6 1.00	i		EQUIP HEATING	0.4	TOTAL	ECTED	KVA 25.2		AMPS 70.0
44.7			HEATING TOTAL	0.5 1.00		0.5			DEMA	ND	26.7		70.0
SC =	INTEGRAL TVSS 14KAIC		OUND BUS DLATED GR	OUND BUS	1			BUS BUS				INTEGRAI 14KAIC	L TVSS
S T	SUBFED TRANSFORMER		L LIGHTING R RECEPTACLE	M MOTOR LM LARGES	IS ST MOTOF	२	E H		IIPMENT TING		S T	SUBFED TRANSFC	DRMER
		l											
US 50A	MAIN 150A. 3P. M.C.B.		PANEL NAME EBUPS012CB	LOCATION ROOM 2C 91		UNTING RFACE	SUPPI	LIED FRO		VOLTAGE 20/208V. 3PH,		BUS 150A	MAIN 150A. 3P. N
НС		CKT NO	CKT NO	PHA PHB PHC		CB P TR	BUS A B C	CB	P CODI	E PHA	/A LOAD PH B	PHC	OAD DESCRIPTIC
200	2A 24 RACK 2	2 4 6	1 3 2C 90 RACK 1 5 7	1200 1200 1200	E	3 30 -		- 30 +	3 E E	1200	1200	1200	2C 90 RACH
200	2A 24 RACK 4	8 10 12	9 2C 90 RACK 3 11 13	1200 1200 1200 1200	E E E	3 30 -		- 30 -	3 E E E	1200	1200	1200	2C 90 RACH
200	2C 33 RACK 2	14 16 18	15 15 17 19	1200 1200 1200		3 30 -		- 30	3 E E E	1200	1200	1200	2D 18 RACH
200	2C 33 RACK 3	20 22 24	21 2D 18 RACK 3 23 25	1200 1200 1200		3 30 -		- 30	3 E E		1200	1200	2D 18 RACH
	SPARE	26 28 30	27 SPARE 29			3 30 -		- 30 +	3				SPAI
	SPACE	32 34	31 SPACE 33 SPACE				*   	-					SPA( SPA(
	SPACESPACE	36 38	35 SPACE 37 SPACE 39 SPACE				×	-					SPA( SPA( SPA(
	SPACESPACE	40 42	41 SPACE	CONNECTED		EMAND	SUBFED						SPAC
VA 10800			LOAD DESCRIPTION	(KVA) D.F. 0.0 1.00		(KVA)		(KVA)		NECTED		VA 9600	
10800 10800			RECEPT (FIRST 10 KW) RECEPT (REMAINDER)	0.0 1.00 0.0 0.50		0.0	RECEPT MOTORS	0.0	PH I PH (			9600 9600	
KVA	AMPS		MOTORS LARGEST MOTOR	0.0 1.00 0.0 1.25		0.0	EQUIP HEATING	0.0	TOTA			KVA	AMI
32.4 32.4	89.9 89.9		EQUIPMENT HEATING TOTAL	28.8 1.00 0.0 1.00 28.8		28.8 0 28.8						28.8 28.8	79
SC =	INTEGRAL TVSS 14KAIC		GROUND BUS ISOLATED GRO		<u> </u>	100	% NEUTRAL % NEUTRAL					ISC =	NTEGRAL TVSS 14KAIC
	SUBFED TRANSFORMER		L LIGHTING R RECEPTACLE	M MOTORS LM LARGEST	MOTOR		E		JIPMENT ATING				SUBFED TRANSFORMER
/													
		Drawing Title ELECTRICA	AL - UPS PAN	NEL SCHEDULE	ES	Phase	SSUE	FOF	r Bic	)	Project T EHF		RASTRUC
	Construction and Facilities										UPG	GRADE	S
	Management					L				]	Location		
		SHEET 18	33 OF 279										HEALTH (
V	U.S. Department of Veterans Affairs										Issue Dat 3/18	te 3/2022	Checke WG
;		7			8						9		

### PANEL NAME MAIN EBUPS011CB 150A. 3P. M.C.B. PH C 3 1C-99 RACK 1 1A-54 RACK 2 4 5 9 1C-99 RACK 3 1A-54 RACK 4 10 11 15 1D-64A RACK 1 1B-121 RACK 1 16 17 19 1B-121 RACK 2 22 21 1D-158 RACK 1 23 24 25 27 1C-99 RACK 4 SPARE 28 29 BLANK 31 BLANK BLANK 34 33 BLANK BLANK 36 35 BLANK BLANK 38 37 BLANK BLANK 40 39 BLANK BLANK 42 41 BLANK VA LOAD DESCRIPTION LIGHTING RECEPT (FIRST 10 KW) RECEPT (REMAINDER) MOTORS KVA AMPS LARGEST MOTOR 79.9 EQUIPMENT 28.8 79.9 HEATING TOTAL INTEGRAL TVSS GROUND BUS ISC = 14KAIC ISOLATED GROUND BUS S SUBFED L LIGHTING

7

R RECEPTACLE

PANEL NAME

EBUPS095CA

CKT NO

RACK 1 \_\_\_\_\_

9 11 RACK 1

15 17 RACK 3

19

21 23

13 PENTHOUSE TR 503

PENTHOUSE TR 502

PENTHOUSE TR 503

LOCATION

ROOM 1D 01

1200

1200 1200

CONNECTED

(KVA)

36.0

M MOTORS

LOCATION

ROOM 4D-06

LM LARGEST MOTOR

D.F.

 (NVA)
 D.P.

 0.0
 1.00

 0.0
 1.00

 0.0
 0.50

 0.0
 1.00

 0.0
 1.00

 0.0
 1.00

 0.0
 1.00

 0.0
 1.25

 36.0
 1.00

 0.0
 1.00

8

1200 E X

1200 E

SURFACE

MOUNTING SUPPLIED FROM

 1200
 E
 3
 30
 E
 1200

 1200
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 30
 X
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 Image: Compared by the second second

**X** 

⁺\_**k**\_\_\_\_Ĺ

(KVA)

36.0

MOUNTING

SURFACE

DEMAND SUBFED LOADS CONNECTED

0.0 LIGHTING 0.0 PH A

0.0 RECEPT 0.0 PH B

 0.0
 NECELITI
 0.0
 TTTB

 0.0
 MOTORS
 0.0
 PH C

 0.0
 EQUIP
 0.0
 0.0

 0.0
 HEATING
 0.0
 TOTAL

100% NEUTRAL BUS

200% NEUTRAL BUS

(KVA)

E EQUIPMENT H HEATING

SUPPLIED FROM

 ROOM 4D-06
 SURFACE
 PDUA
 120/208V. 3PH, 4W
 250
 250

 PH A
 PH B
 PH C
 CODE
 P
 TR
 A
 B
 C
 TR
 P
 CODE
 PH A
 PH B
 PH C
 CODE
 P
 TR
 A
 B
 C
 TR
 P
 CODE
 PH A
 PH B
 PH C
 COAD DESCRIPTION
 COAD DESCRIPTION

 2
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 FE

CONNECTED

VOLTAGE

PDU A 120/208V. 3PH, 4W 250

BUS

DEMAND DESIGN

E 3 30 X 30 Z 50 3 E

9

1200

1200

1200

VOLTAGE

1200

120/208V. 3PH, 4W 150A 150A. 3P.

BUS 150A	MAIN 150A. 3P. M.C.B	
PH C	LOAD DESCRIPTION	CKT NO 2 4
1200	1D-64A RACK 2	6 8 10
1200 1200	1D-64A RACK 3	12 14 16 18
1200	1C-99 RACK 5	20 22 24
1200	1D-64A RACK 4	26 28 30
	BLANK BLANK BLANK BLANK	32 34 36 38
	BLANK BLANK BLANK	40 42
VA 12000 12000		
12000 KVA 36.0	AMPS 99.9	
36.0	99.9	
ISC =	INTEGRAL TVSS 14KAIC	
	SUBFED TRANSFORMER	
	MAIN	]
LOAD DES	250 SCRIPTION CKT	
	NO           THOUSE TR 501         2           4         6	-
	4B 23 RACK 4 8 10 12	-
PENTHOU RACK 2	ISE TR 503 14 16 18	
PENTHOU RACK 4	ISE TR 503 20 22 24 26	
	26 28 30 32	
	34 36 38	
	SPARE 40 42 SPACE 44	
	SPACE 46 SPACE 48 SPACE 50 SPACE 52	
	SPACE 52 SPACE 54 SPACE 56 SPACE 58	
	SPACE 56 SPACE 60	
		1
	AMPS 70.0	-
INTEGRAL	74.1	
INTEGRAL 14KAIC		
SUBFED TRANSFO	RMER	
BUS	MAIN	_
150A L	150A. 3P. M.C.B. OAD DESCRIPTION	CKT NO
1200	2C 90 RACK 2	2 4 6
1200	2C 90 RACK 4	8 10 12 14
1200	2D 18 RACK 2	14 16 18 20
1200	2D 18 RACK 4	20 22 24 26
	SPARE	28 30 32
	SPACE SPACE SPACE	34 36 38
VA	SPACE	40 42
9600 9600		
9600 KVA 28.8	AMPS	
28.8 28.8	79.9 79.9	
ISC =	NTEGRAL TVSS 14KAIC	
	UBFED RANSFORMER	
	RASTRUCTUR	E
GRADE	S	
(GO \/A	A HEALTH CAR	(F .S)
te	Checked	Dra
8/2022	WG	

		BASEME	NT BI DG 1.	9, 46 UPS WIF	RING		
CONDUIT	FRO			TO			
NUMBER	ROOM	PNL	ROOM	RACK		LENGTH	
		EBUPS					
	BC 50A UPS A	DSWBD	BD-02	1	4#8&1#10G, 3/4 IN C	225	
		EBUPS					
	BC 50A UPS A	DSWBD	BD-02	2	4#8&1#10G, 3/4 IN C	225	
		EBUPS					
	BC 50A UPS A	DSWBD	BB-92	1	4#10&1#10G, 3/4 IN C	50	
		EBUPS					
	BC 50A UPS A	DSWBD	BB-92	2	4#10&1#10G, 3/4 IN C	50	
		EBUPS					
	BC 50A UPS A	DSWBD	BB-92	3	4#10&1#10G, 3/4 IN C	50	
		EBUPS					
	BC 50A UPS A	DSWBD	BD-84	1	4#6&1#10G, 1 IN C	420	
		EBUPS					
	BC 50A UPS A	DSWBD	BD-84	2	4#6&1#10G, 1 IN C	420	
		EBUPS					
	BC 50A UPS A	DSWBD	BA-30	1	4#10&1#10G, 3/4 IN C	190	
		EBUPS					
	BC 50A UPS A	DSWBD	BA-30	2	4#10&1#10G, 3/4 IN C	190	
		EBUPS					
	BC 50A UPS A	DSWBD	BA-30	3	4#10&1#10G, 3/4 IN C	190	
		EBUPS					
	BC 50A UPS A	DSWBD	BC-02	1	4#10&1#10G, 3/4 IN C	180	
		EBUPS					
	BC 50A UPS A	DSWBD	BC-02	2	4#10&1#10G, 3/4 IN C	180	
		EBUPS					
	BC 50A UPS A	DSWBD	BC-02	3	4#10&1#10G, 3/4 IN C	180	

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VA FORM 08 - 6231

1

		1ST FLOO	DR BLDG 1,	9, 46 UPS WIRIN	NG	
CONDUIT	FRC	M		ТО	WIRI	
NUMBER	ROOM	PNL	ROOM	RACK		
		EBUPS			<u>лн1 /</u>	
1	BC 50A UPS A	DSWBD	1B121	EBUPS461NA	4#1/	
	1B121	EBUPS461NA	1A-54	1	4#10&	
	1B121	EBUPS461NA	1A-54	2	4#10&	
	1B121	EBUPS461NA	1A-54	3	4#10&	
	1B121	EBUPS461NA	1A-54	4	4#10&	
	1B121	EBUPS461NA	1A-54	5	4#10&	
	1B121	EBUPS461NA	1A-54	6	4#10&	
	1B121	EBUPS461NA	1B-121	1	4#10&	
	1B121	EBUPS461NA	1B-121	2	4#10&	
		EBUPS			4#2500	
2	BC 50A UPS A	DSWBD	1D-01	EBUPS011CB	4#2508	
	1D-01	EBUPS011CB	1D-158	1	4#10&	
	1D-01	EBUPS011CB	1C-99	1	4#10&	
	1D-01	EBUPS011CB	1C-99	2	4#10&	
	1D-01	EBUPS011CB	1C-99	3	4#10&	
	1D-01	EBUPS011CB	1C-99	4	4#10&	
	1D-01	EBUPS011CB	1C-99	5	4#10&	
	1D-01	EBUPS011CB	1D-64A	1	4#10&	
	1D-01	EBUPS011CB	1D-64A	2	4#10&	
	1D-01	EBUPS011CB	1D-64A	3	4#10&	
	1D-01	EBUPS011CB	1D-64A	4	4#10&	

				CONSULTANT
SUE FOR BID			03-18-22	-
evisions:			Date:	
				_
		2		3
	1		1	

		2ND FL	OOR BLDG	1, 9, 46 UPS WI	RING	
CONDUIT	FR	ОМ		ТО	WIRING / CONDUIT	LENGTH
NUMBER	ROOM	PNL	ROOM	RACK	WIKING / CONDOIT	
3	BC 50A UPS A	EBUPS DSWBD	2B-32	EBUPS092NA	4#2/0&1#6G, 2 IN C	160
	2B-32	EBUPS092NA	2A-24	1	4#10&1#10G, 3/4 IN C	110
	2B-32	EBUPS092NA	2A-24	2	4#10&1#10G, 3/4 IN C	110
	2B-32	EBUPS092NA	2A-24	3	4#10&1#10G, 3/4 IN C	110
	2B-32	EBUPS092NA	2A-24	4	4#10&1#10G, 3/4 IN C	110
	2B-32	EBUPS092NA	2A-24	5	4#10&1#10G, 3/4 IN C	110
	2B-32	EBUPS092NA	2A-24	6	4#10&1#10G, 3/4 IN C	110
		551150000114				
	2B-32	EBUPS092NA	2C-33	1	4#10&1#10G, 3/4 IN C	64
				2		62
	2B-32	EBUPS092NA	2C-33	2	4#10&1#10G, 3/4 IN C	63
				2	4#100 1#10C 2/4 IN C	62
	2B-32	EBUPS092NA	2C-33	3	4#10&1#10G, 3/4 IN C	63
Λ		EBUPS DSWBD	20.01		4#4/00 1#4C 2 1/2 IN C	240
4	BC 50A UPS A		2C-91	EBUPS012CB	4#4/0&1#4G, 2 1/2 IN C	240
	20.01			1	4#100 1#10C 2/4 IN C	20
	2C-91	EBUPS012CB	2C-90A	1	4#10&1#10G, 3/4 IN C	30
	2C-91	EBUPS012CB	2C-90A	2	4#10&1#10G, 3/4 IN C	30
	2C-91	EBUPS012CB	2C-90A	3	4#10&1#10G, 3/4 IN C	30
	2C-91	EBUPS012CB	2C-90A	4	4#10&1#10G, 3/4 IN C	30
	2C-91	EBUPS012CB	2D-18	1	4#10&1#10G, 3/4 IN C	100
	2C-91	EBUPS012CB	2D-18	2	4#10&1#10G, 3/4 IN C	100
	2C-91	EBUPS012CB	2D-18	3	4#10&1#10G, 3/4 IN C	100
	2C-91	EBUPS012CB	2D-18	4	4#10&1#10G, 3/4 IN C	100
				I I	/ - /	

### RING / CONDUIT | LENGTH 1/0&#6G, 2 IN C 100 &1#10G, 3/4 IN C 160 0&1#10G, 3/4 IN C 160 0&1#10G, 3/4 IN C 160 &1#10G, 3/4 IN C 30 &1#10G, 3/4 IN C 30 0&#4G, 2 1/2 IN C 360 &1#10G, 3/4 IN C 100 &1#10G, 3/4 IN C 30 &1#10G, 3/4 IN C 170 D&1#10G, 3/4 IN C170D&1#10G, 3/4 IN C170D&1#10G, 3/4 IN C170

							5TH FLOOR PENTHOUSE BLDG 1, 9, 46 UPS WIRING						
		3RD FL	OOR BLDG	1, 9, 46 UPS WI	RING		CONDUIT	CONDUIT FROM		ТО		WIRING / CONDUIT	LENGTH
CONDUIT	FROM		то		WIRING / CONDUIT	LENGTH	NUMBER	ROOM	PNL	ROOM	RACK		
NUMBER	ROOM	PNL	ROOM	RACK			8	BC 50A UPS A	EBUPS DSWBD	PENTHOUSE A	EBUPS095CA	4#4/0G, 2 1/2 IN C	500
5	BC 50A UPS A	EBUPS DSWBD	3C-38	EBUPS463CA	4#250&1#4G, 2 1/2 IN C	310		4D-06	EBUPS095CA	PENT TR 501	1	4#8&1#10G, 3/4 IN C	140
	3C-38	EBUPS463CA	3D-12	1	4#10&1#10G, 3/4 IN C	70		4D-06	EBUPS095CA	PENT TR 502	1	4#8&1#10G, 3/4 IN C	140
	3C-38	EBUPS463CA	3D-12	2	4#10&1#10G, 3/4 IN C	70		4D-06	EBUPS095CA	PENT TR 503	1	4#8&1#10G, 3/4 IN C	90
	3C-38	EBUPS463CA	3D-12	3	4#10&1#10G, 3/4 IN C	70		4D-06	EBUPS095CA	PENT TR 503	2	4#8&1#10G, 3/4 IN C	90
	3C-38	EBUPS463CA	3D-12	4	4#10&1#10G, 3/4 IN C	70		4D-06	EBUPS095CA	PENT TR 503	3	4#8&1#10G, 3/4 IN C	90
	3C-38	EBUPS463CA	3B-23	1	4#10&1#10G, 3/4 IN C	180		4D-06	EBUPS095CA	PENT TR 503	4	4#8&1#10G, 3/4 IN C	90
	3C-38	EBUPS463CA	3B-23	2	4#10&1#10G, 3/4 IN C	180							
	3C-38	EBUPS463CA	3B-23	3	4#10&1#10G, 3/4 IN C	180							
	3C-38	EBUPS463CA	3B-23	4	4#10&1#10G, 3/4 IN C	180							
	3C-38	EBUPS463CA	3B-23	5	4#10&1#10G, 3/4 IN C	180							

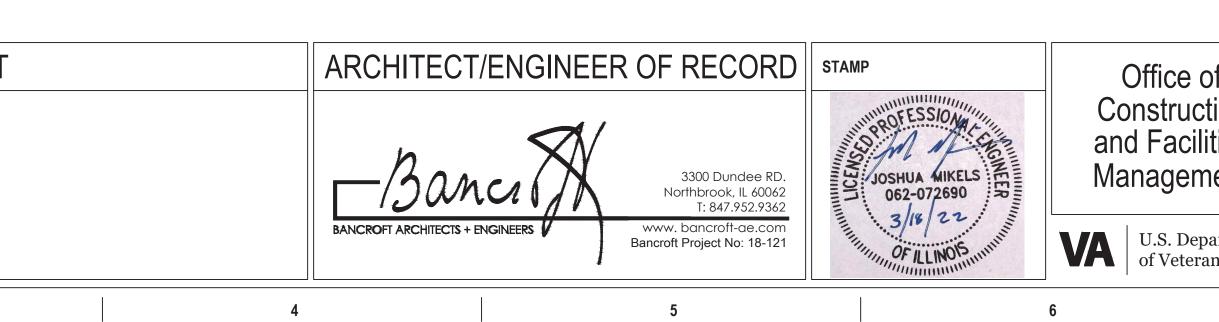
### TR RACK UPS POWER WIRING SCHEDULE

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CONDUIT	FI	ROM	FLOOR BLDG 2	ТО		
NUMBER	ROOM	PNL	ROOM	RACK	WIRING / CONDUIT	LENGTH
6	BC 50A UPS A	EBUPS DSWBD	4D-06	EBUPS014CA	(2) 4#500&1#1/0G, (2) 4 IN C	360
	4D-06	EBUPS014CA	4B-23	1	4#8&1#10G, 3/4 IN C	224
	4D-06	EBUPS014CA	4B-23	2	4#8&1#10G, 3/4 IN C	224
	4D-06	EBUPS014CA	4B-23	3	4#8&1#10G, 3/4 IN C	224
	4D-06	EBUPS014CA	4B-23	4	4#8&1#10G, 3/4 IN C	224
	4D-06	EBUPS014CA	4E-15	1	4#8&1#10G, 3/4 IN C	288
	4D-06	EBUPS014CA	4E-15	2	4#8&1#10G, 3/4 IN C	288

8

9

CONDUIT	FF	ROM	-	ТО			
NUMBER	ROOM	PNL	BLDG ROOM	RACK	WIRING / CONDUIT	LENGTH	
7	BC 50A UPS A	EBUPS DSWBD	40 102B	EBUPS401WA	4#4/0G, 2 1/2 IN C	500	
	40 102B	EBUPS401WA	40 102B	1	4#8&1#10G, 3/4 IN C	10	
	40 102B			2	4#8&1#10G, 3/4 IN C	10	
	40 102B	EBUPS401WA	40 102B	3	4#8&1#10G, 3/4 IN C	10	
	40 102B	EBUPS401WA	40 102B	4	4#8&1#10G, 3/4 IN C	10	
	40 102B	EBUPS401WA	40 204C	1	4#8&1#10G, 3/4 IN C	30	
	40 102B	EBUPS401WA	40 204C	2	4#8&1#10G, 3/4 IN C	30	

	Drawing Title ELECTRICAL - UPS PA SCHEDULES	NELS WIRING	Phase ISSUE FOR BID	Project Title EHRM INFRASTRUCTURE UPGRADES			
	SHEET 184 OF 279			Location FARGO VA HEALTH CARE SYSTEM			Drawing
U.S. Department of Veterans Affairs				Issue Date 3/18/2022	Checked WG	Drawn BX	
	7		8	9			10

	Project Number
TURE	437-21-205
	Building Number
	-
	Drawing Number
CARE SYSTEM	
d Drawn	E603
BX	
	,

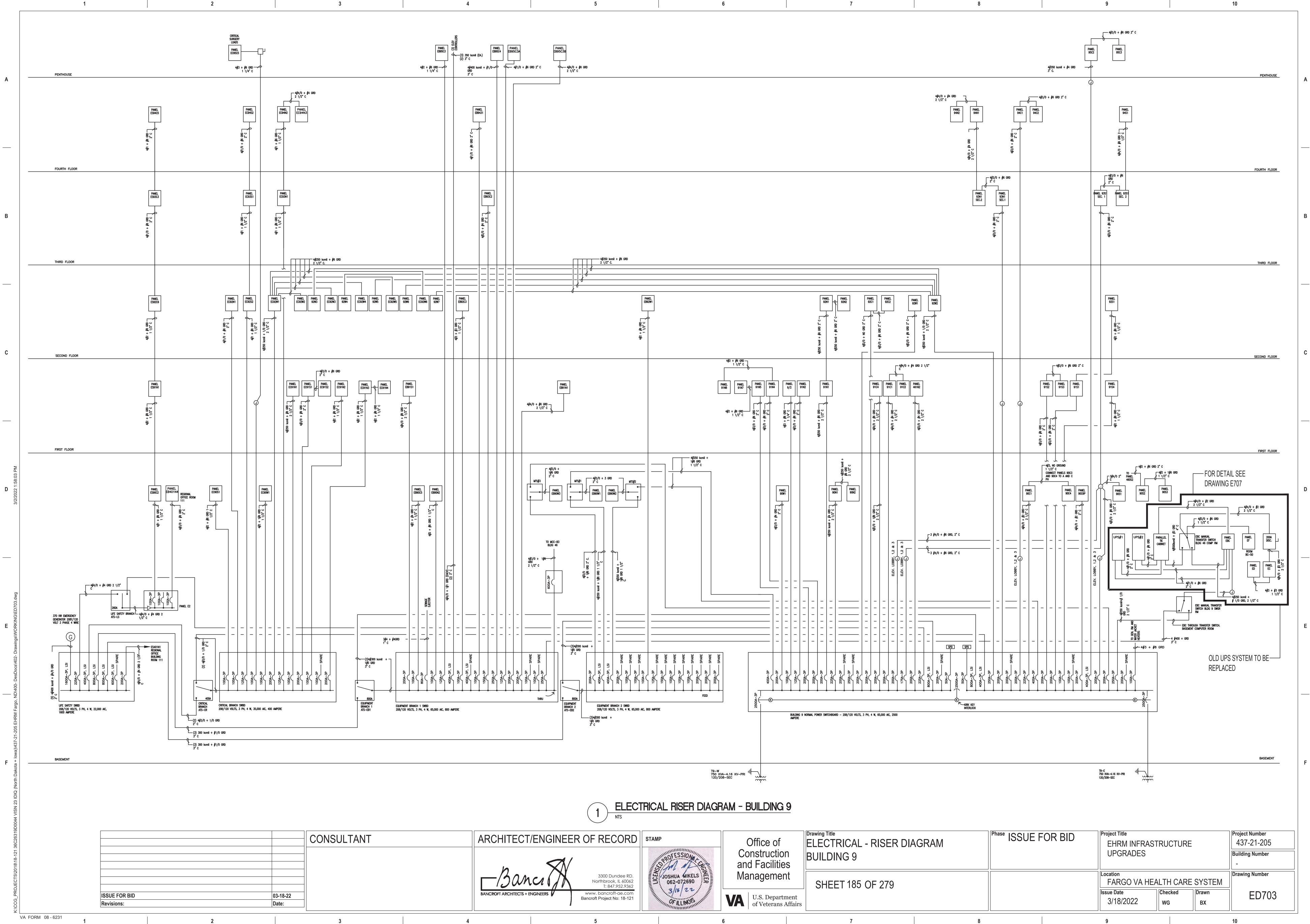
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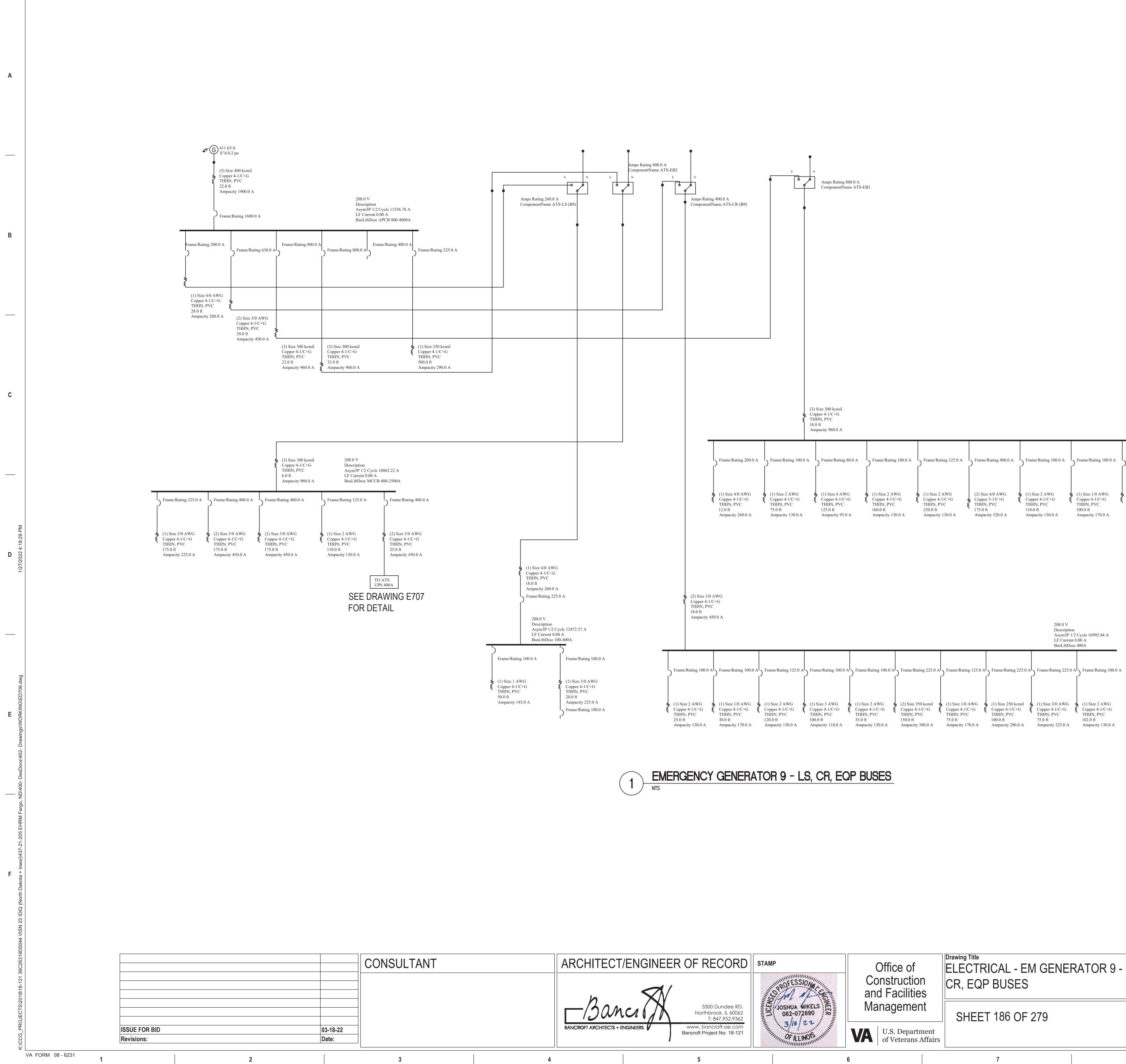
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F



e of	Drawing Title ELECTRICAL - RISEF BUILDING 9	R DIAGRAM		<sup>Phase</sup> ISSUE F	OR BID	Project Title EHRM INFRASTRUC UPGRADES		
	SHEET 185 OF 279			Location FARGO VA H	IEALTH CA			
epartment erans Affairs						Issue Date 3/18/2022	Checked WG	
	7		8			9		



3

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1

208.0 V Description Asym3P 1/2 Cycle 19651.93 A LF Current 298.03 A BusLibDesc 800A

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G <b>4</b> ⊦G <b>8</b> .0 A	(1) Size 2 AWG Copper 4-1/C+G THHN, PVC 230.0 ft Ampacity 130.0 A	(2) Size 4/0 AWG Copper 3-1/C+G THHN, PVC 175.0 ft Ampacity 520.0 A	(1) Size 2 AWG Copper 4-1/C+G THHN, PVC 110.0 ft Ampacity 130.0 A	(1) Size 1/0 AWG Copper 4-1/C+G THHN, PVC 100.0 ft Ampacity 170.0 A	(1) Size 3/0 AWG Copper 4-1/C+G THHN, PVC 75.0 ft Ampacity 225.0 A	(1) Size 400 kcmil Copper 4-1/C+G THHN, PVC 45.0 ft Ampacity 380.0 A	: (1) Size 4/0 AWG Copper 4-1/C+G THHN, PVC 200.0 ft Ampacity 260.0 A	<ul> <li>(1) Size 4/0 AWG Copper 4-1/C+G THHN, PVC</li> <li>45.0 ft Ampacity 260.0 A</li> </ul>	

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U.S. Department of Veterans Affairs					Issue Date 3/18/2022	Checked WG	Drawn BX	
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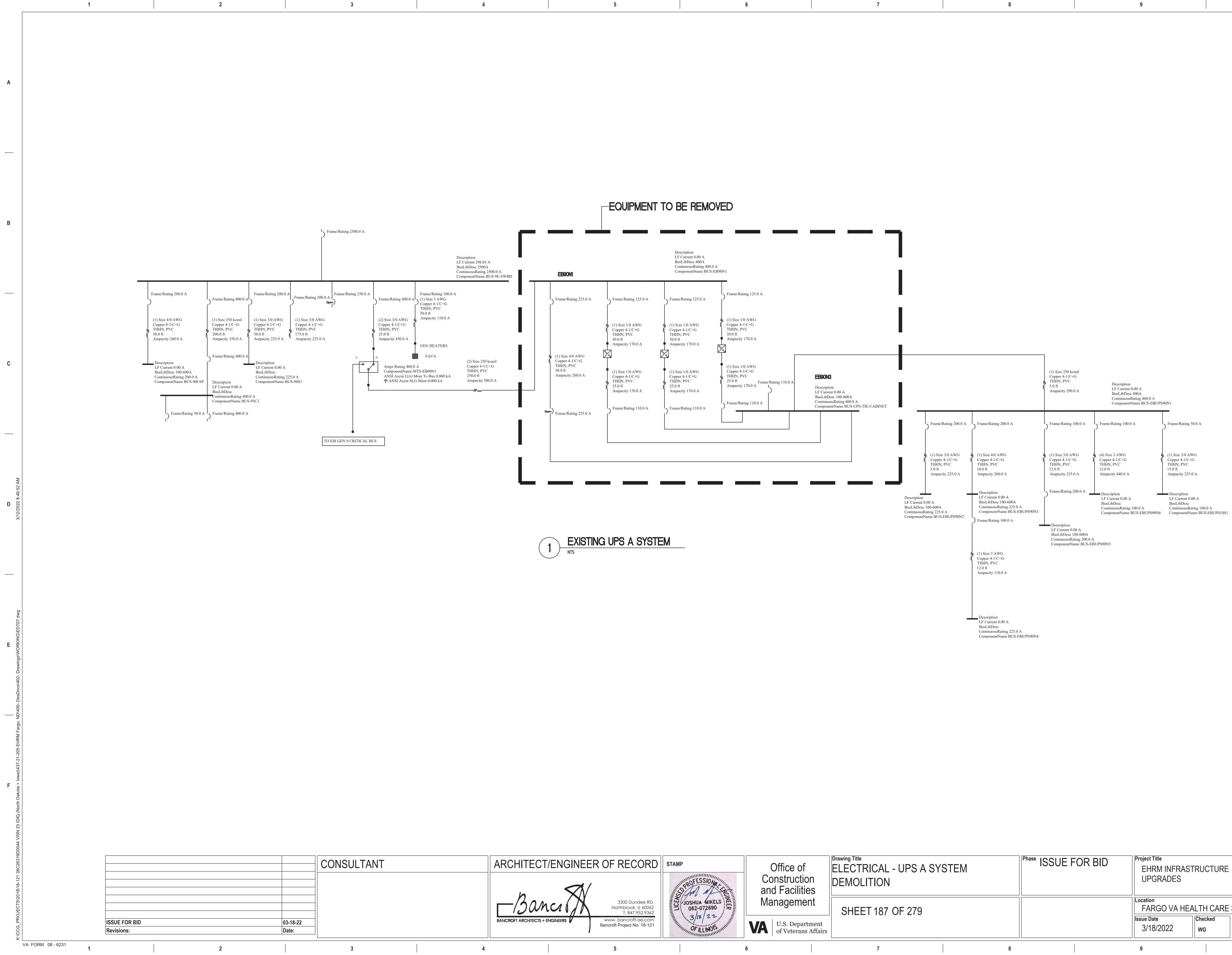
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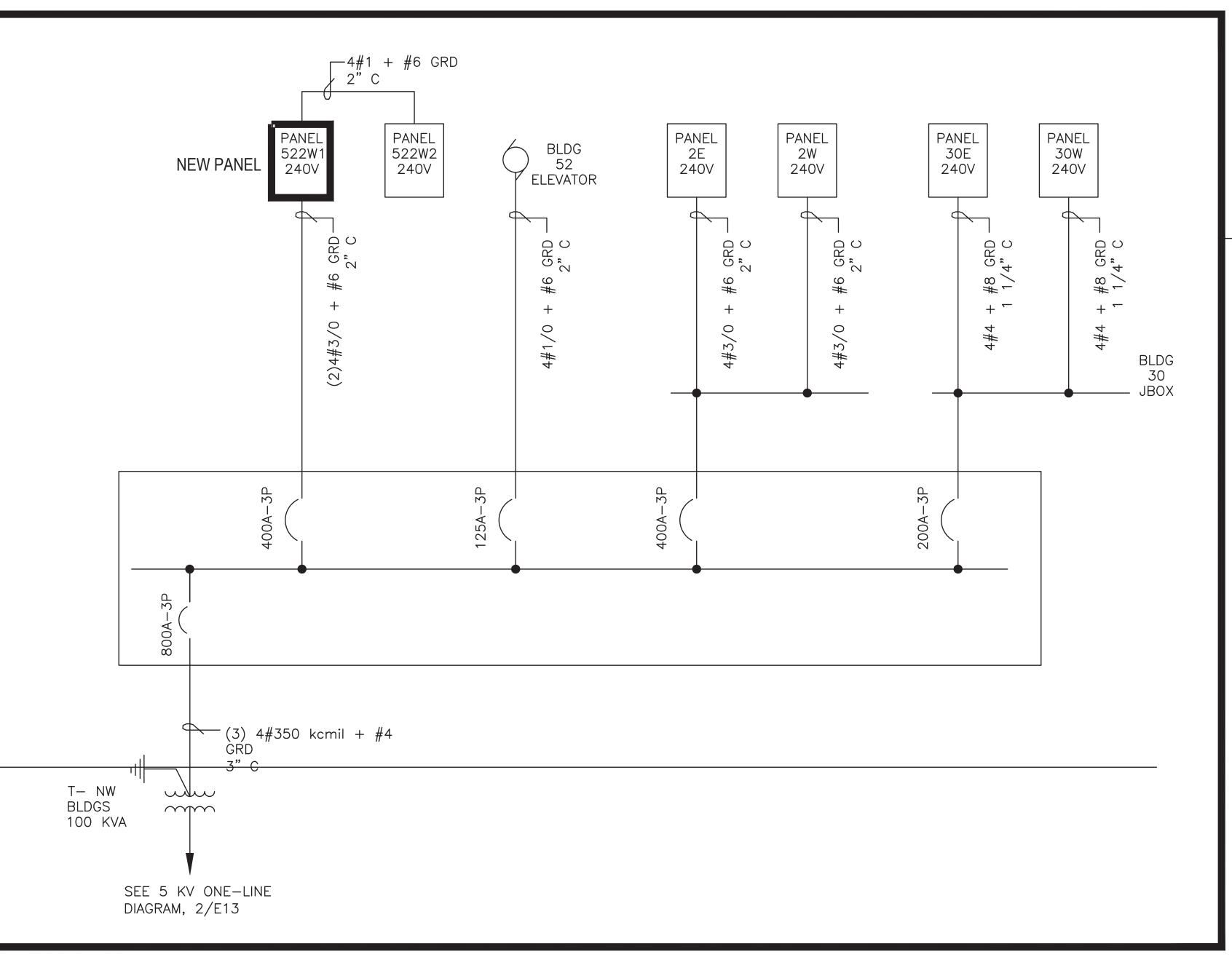
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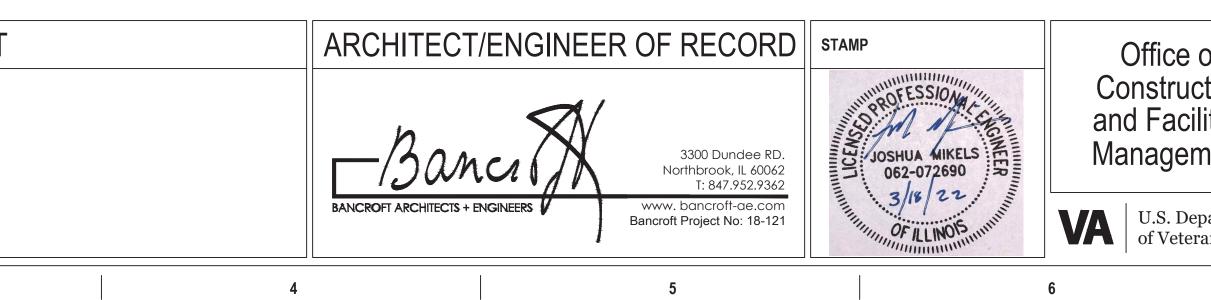


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1 ELECTRICAL SINGLE LINE DIAGRAM - BUILDING 30 AND 52



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WHIHIN	Management         VA       U.S. Department         of Veterans Affairs		SHEET 188 OF 279					Location FARGO VA HEALTH CARE SYSTEM			Drawing
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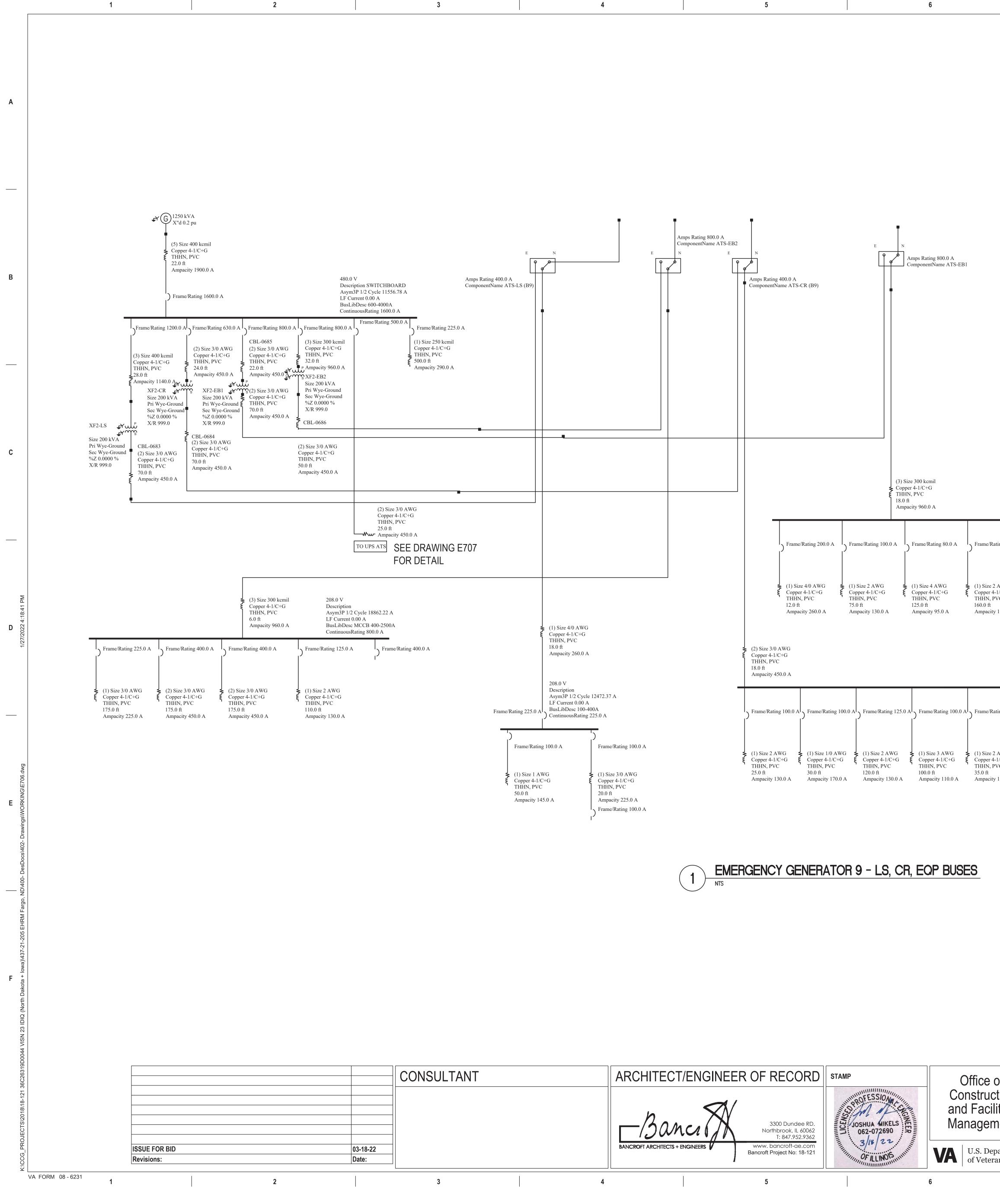
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ee 2 AWG er 4-1/C+G N, PVC ft city 130.0 A	(1) Size 2 AWG Copper 4-1/C+G THHN, PVC 230.0 ft Ampacity 130.0 A	(2) Size 4/0 AWG Copper 3-1/C+G THHN, PVC 175.0 ft Ampacity 520.0 A	<ul> <li>(1) Size 2 AWG</li> <li>Copper 4-1/C+G</li> <li>THHN, PVC</li> <li>110.0 ft</li> <li>Ampacity 130.0 A</li> </ul>	<ul> <li>(1) Size 1/0 AWG</li> <li>Copper 4-1/C+G</li> <li>THHN, PVC</li> <li>100.0 ft</li> <li>Ampacity 170.0 A</li> </ul>	<ul> <li>(1) Size 3/0 AWG</li> <li>Copper 4-1/C+G</li> <li>THHN, PVC</li> <li>75.0 ft</li> <li>Ampacity 225.0 A</li> </ul>	<ul> <li>(1) Size 400 kcmil</li> <li>Copper 4-1/C+G</li> <li>THHN, PVC</li> <li>45.0 ft</li> <li>Ampacity 380.0 A</li> </ul>	<ul> <li>(1) Size 4/0 AWG Copper 4-1/C+G THHN, PVC 200.0 ft Ampacity 260.0 A</li> </ul>	<ul> <li>(1) Size 4/0 AWG</li> <li>Copper 4-1/C+G</li> <li>THHN, PVC</li> <li>45.0 ft</li> <li>Ampacity 260.0 A</li> </ul>	
				208.0 V Description Asym3P 1/2 Cycle 16992.84 LF Current 0.00 A BusLibDesc 400A ContinuousRating 400.0 A	4 A				
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er 4-1/C+G <b>ξ</b> Co N, PVC TI t 15	ppper 4-1/C+G         \$         Co           HHN, PVC         TI           0.0 ft         75	opper 4-1/C+G         ξ         Copp           HHN, PVC         THH           5.0 ft         100.0		I-1/C+G <b>ξ</b> Copper 4-1/	2				
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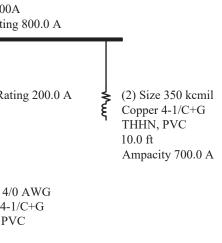
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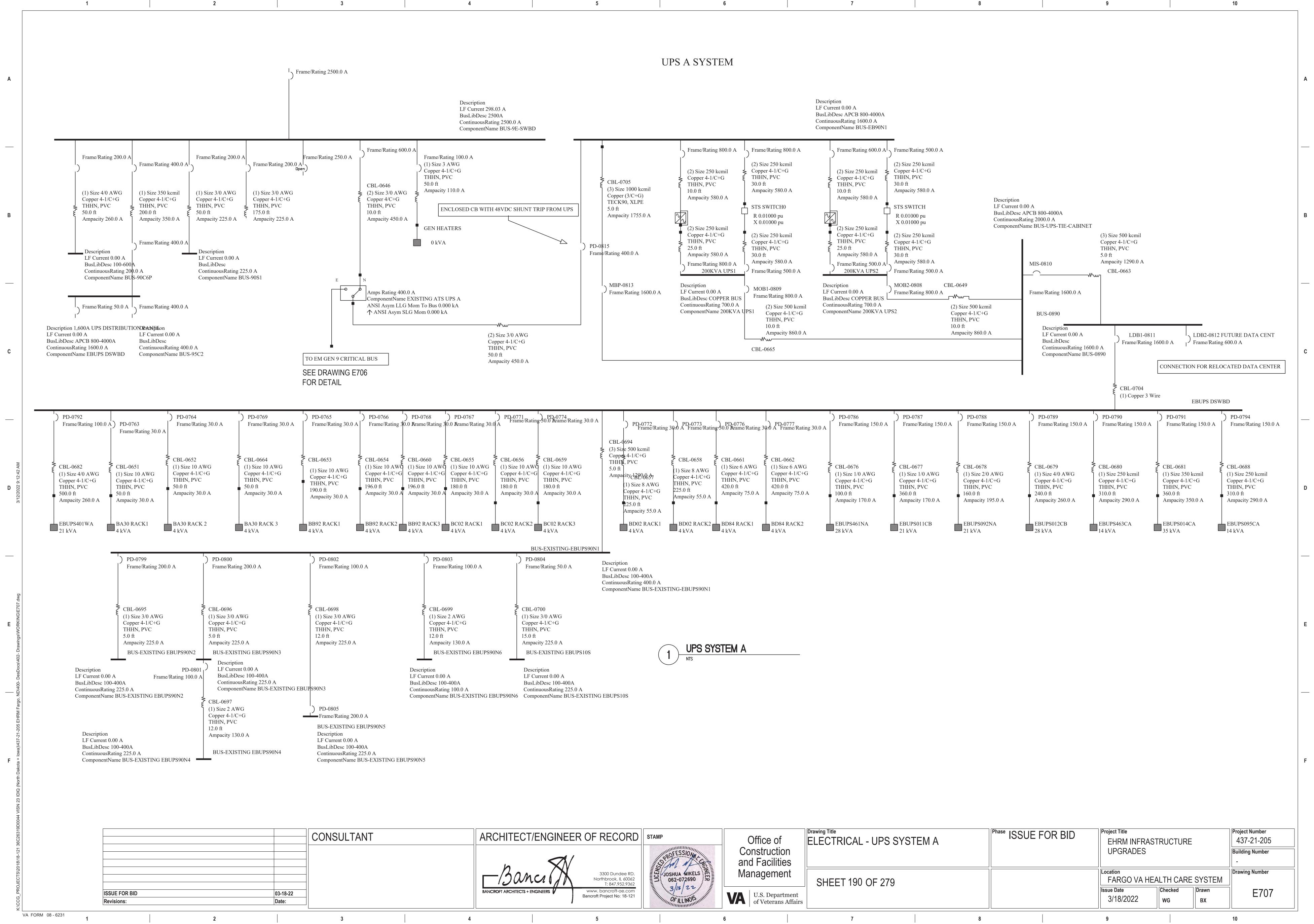
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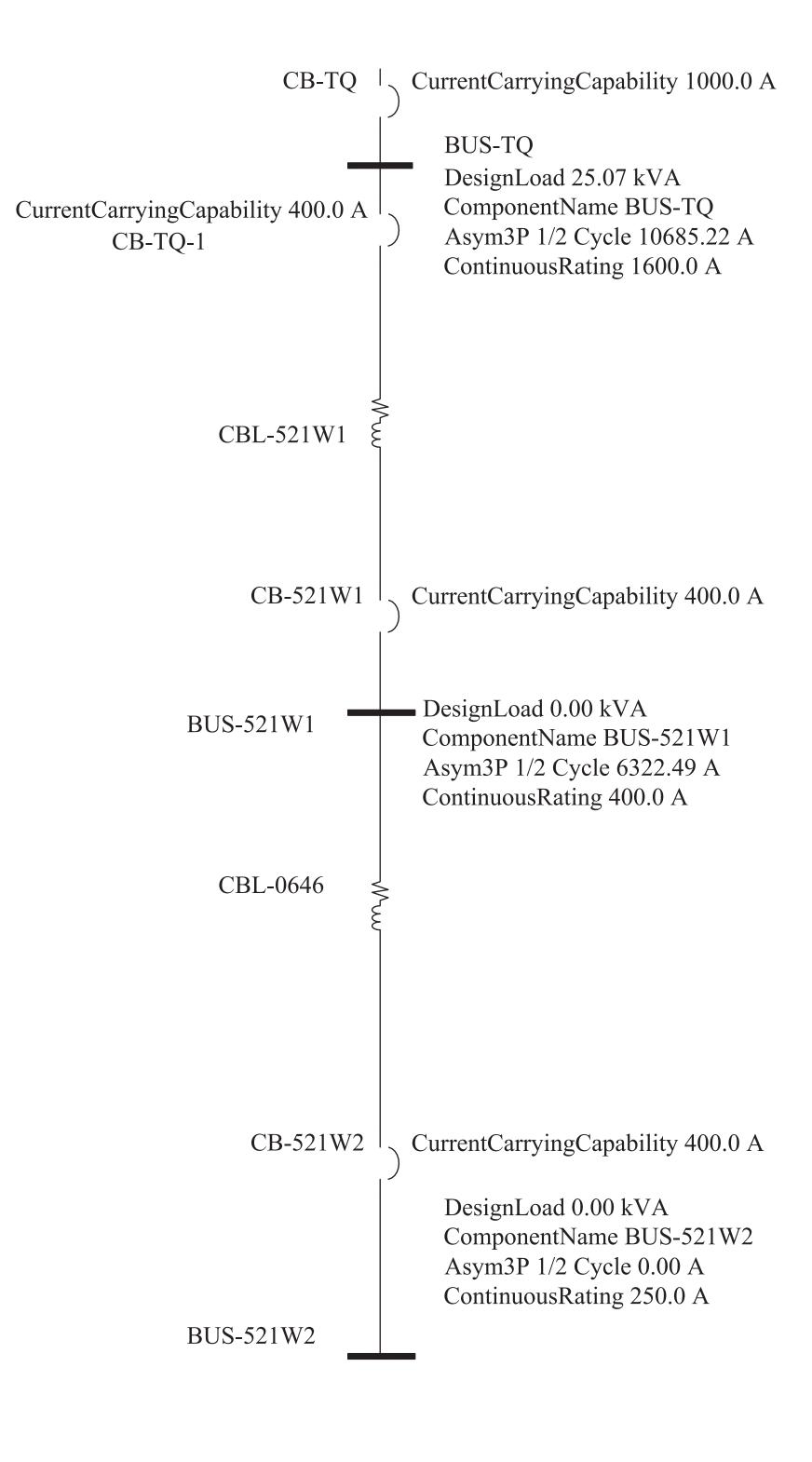
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Τ	ARCHITECT/ENGINEER OF RECORD	) STAMP	Office	
	Banand 3300 Dundee RD. Northbrook, IL 60062 T: 847.952.9362	JOSHUA MIKELS 062-072690	Constru and Fac Manage	
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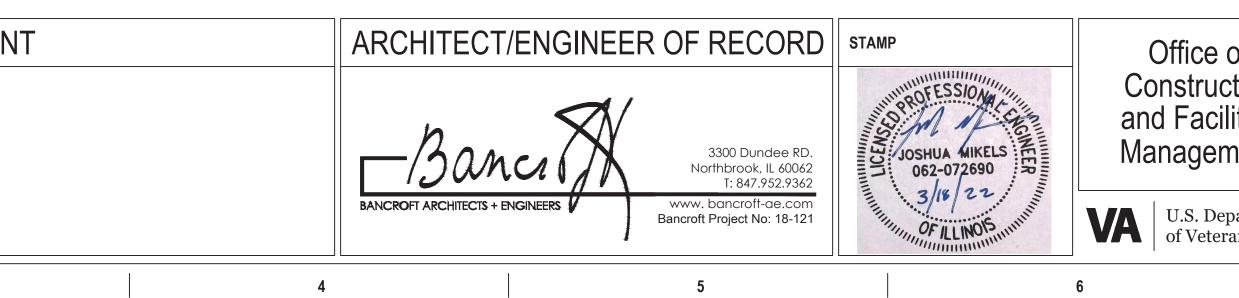
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