MOUNTING HEIGHTS FOR ELECTRICAL DEVICES

DEVICE	MOUNTING HEIGHTS
LIGHT SWITCHES, WALL MOUNTED OCCUPANCY SENSORS	48" TO CENTERLINE OF BOX. EXCEPTION: 44" MAXIMUM TO TOP ABOVE COUNTERS WHICH ARE 20"-25"D.
DISCONNECT SWITCHES, MOTOR STARTERS, MOTOR PUSH BUTTON STATIONS	60" TO CENTERLINE.
WALL MOUNTED EXIT SIGNS	90" TO CENTERLINE OF SIGN OR CENTERED IN WALL AREA BETWEEN TOP OF DOOR AND CEILING.
CEILING MOUNTED EXIT SIGNS	80" TO BOTTOM FIXTURE.
RECEPTACLES	16" TO BOTTOM OF BOX. EXCEPTION: 44" MAXIMUM TO TOP ABOVE COUNTERS WHICH ARE 20"-25"D.
SPECIAL OUTLETS OR RECEPTACLES	16" TO BOTTOM OF BOX OR AS NOTED ON DRAWINGS. EXCEPTION: 44" MAXIMUM TO TOP ABOVE COUNTERS WHICH ARE 20"-25"D.
PLUGMOLD OR WIREMOLD	AS NOTED ON DRAWINGS. EXCEPTION: 44" MAXIMUM TO TOP ABOVE COUNTERS WHICH ARE 20"-25"D.
CLOCK OUTLETS	12" CEILING TO CENTERLINE OR 7'-0" TO CENTERLINE IF CEILING IS OVER 8'-0".
DATA/COMMUNICATION OR TELEPHONE OUTLETS	16" TO BOTTOM OF BOX.
TELEPHONE OUTLETS - WALL TYPE	54" TO DIAL CENTER (NON-ACCESSIBLE). 48" TO HIGHEST OPERABLE PART (ACCESSIBLE).
PAY TYPE TELEPHONE OUTLETS	48" MAXIMUM TO COIN SLOT.
FIRE ALARM MANUAL PULL STATIONS	48" TO CENTERLINE OF BOX - NOT MORE THAN 5'-0" FROM EXIT.
FIRE ALARM AUDIBLE ONLY DEVICE	NOT LESS THAN 90" TO TOP OR 6" BELOW CEILING, WHICH EVER IS HIGHER.
FIRE ALARM VISUAL ONLY DEVICE OR A COMBINATION AUDIBLE AND VISUAL DEVICE	80" TO BOTTOM OF DEVICE OR NOT MORE THAN 96" TO TOP.
WALL MOUNTED REMOTE INDICATOR LIGHT	80" TO CENTERLINE OF DEVICE OR 6" BELOW CEILING, WHICHEVER IS LOWER.
AREA OF REFUGE TELEPHONE	SAME AS TELEPHONE - ACCESSIBLE.
CALL FOR AID SWITCH WITH PULL CHAIN TO FLOOR	48" TO CENTERLINE OF BOX MINIMUM (TOILETS). 66" TO CENTERLINE OF BOX MAXIMUM (SHOWERS - LOCATED OUT OF SPRAY AREA).
CARD READER	48" TO HIGHEST OPERABLE PART (SIDE OR FORWARD ACCESS).
INTERCOM STATION	54" TO HIGHEST OPERABLE PART (SIDE ACCESS). 48" HIGHEST OPERABLE PART (FORWARD ACCESS).
SOUND SYSTEM VOLUME CONTROL	54" TO HIGHEST OPERABLE PART (SIDE ACCESS). 48" HIGHEST OPERABLE PART (FORWARD ACCESS).
MICROPHONE OUTLETS	16" TO BOTTOM OF BOX.
THERMOSTATS	54" TO HIGHEST OPERABLE PART (SIDE ACCESS). 48" HIGHEST OPERABLE PART (FRONT ACCESS).
TEMPERATURE/HUMIDITY SENSORS	60" TO CENTER LINE OF BOX.

NOTES:

1. ALL DIMENSIONS ARE CONSIDERED FROM FINISHED FLOOR AND, UNLESS NOTED OTHERWISE, SHALL NOT VARY. RAISED FLOORS SHALL BE CONSIDERED FINISHED FLOOR.
2. ALL DIMENSIONS SHALL BE COORDINATED WITH ARCHITECTURAL DETAILS AND MAY BE ADJUSTED TO CONFORM WITH ARCHITECTURAL REQUIREMENTS AS LONG AS NO CODE RESTRICTION IS VIOLATED.
3. OUTLETS INSTALLED LOWER THAN 15" AFF (FORWARD REACH) AND 9" AFF (SIDE REACH) ARE IN VIOLATION OF ADA.

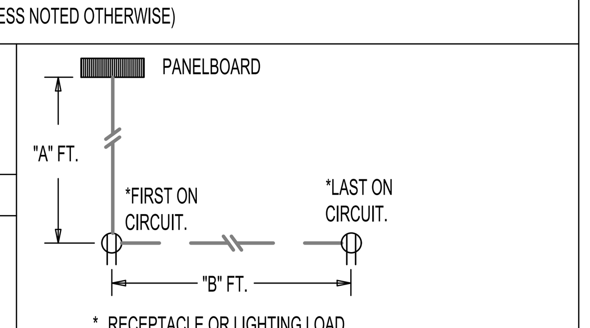
SPECIAL NOTES:

1. EXIT SIGNS SHALL NOT BE INSTALLED IN A MANNER THAT THE SIGN WILL BLOCK FIRE ALARM VISUAL DEVICES.
2. FOR LIGHTING FIXTURES MOUNTING HEIGHTS SEE SCHEDULE AND DRAWINGS.

WIRE/CONDUIT SIZING TABLE

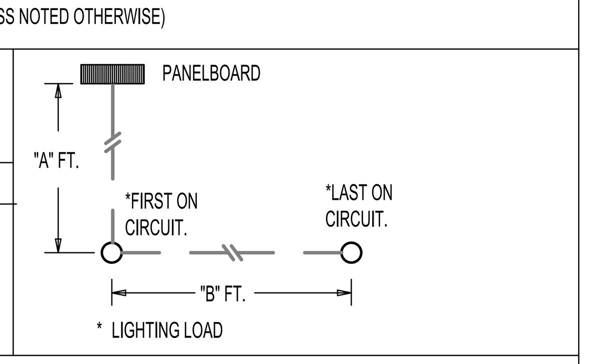
FOR 120V-20A BRANCH CIRCUITS ONLY (UNLESS NOTED OTHERWISE)

IF DISTANCE (A+B) IN FEET IS: (SEE DIAGRAM AT RIGHT)	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY.	
	WIRE SIZE	CONDUIT SIZE
0' TO 100'	#12 AWG (MIN.)	3/4"
100' TO 175'	#10 AWG	3/4"
175' TO 300'	#8 AWG	3/4"
300' TO 450'	#6 AWG (MAX.)	1"



FOR 277V-20A BRANCH CIRCUITS ONLY (UNLESS NOTED OTHERWISE)

IF DISTANCE (A+B) IN FEET IS: (SEE DIAGRAM AT RIGHT)	USE COPPER WIRE IN METALLIC CONDUIT, AWG SIZE AS FOLLOWS ON ENTIRE CIRCUIT AND SIZE CONDUIT ACCORDINGLY.	
	WIRE SIZE	CONDUIT SIZE
0' TO 250'	#12 AWG (MIN.) #10 AWG	3/4"
250' TO 400'		3/4"
400' TO 700'	#8 AWG	3/4"
700' TO 1000'	#6 AWG (MAX.)	1"



NOTES:

1. TABLES ARE BASED ON EVENLY DISTRIBUTED LOAD ALLOWING A 3% VOLTAGE DROP AT LAST OUTLET/LIGHT.
2. 480V MOTOR BRANCH CIRCUIT CONDUCTORS SHALL BE #12 AWG IN 3/4" C UNLESS OTHERWISE NOTED.
3. SIZE OF CONDUCTORS ARE BASED UPON EACH MOTOR BEING FED WITH SEPARATE CONDUIT. IF CONDUCTORS FOR TWO MOTORS (MAX.) ARE TO BE COMBINED IN ONE CONDUIT, INCREASE THE SIZE OF CONDUCTORS AND CONDUITS PER NATIONAL ELECTRICAL CODE (NEC), TO COMPENSATE FOR CONDUCTOR DE-RATING.
4. PROVIDE DEDICATED NEUTRAL FOR EACH CIRCUIT.
5. PROVIDE EQUIPMENT GROUND CONDUCTOR FOR EACH CIRCUIT, SIZE TO COMPLY WITH NEC REQUIREMENTS.

ELECTRICAL GENERAL NOTES

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

2. 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/CRITERIA SHALL BE SUBMITTED AND APPROVED FROM AOR BEFORE BID AND AOR 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 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.

5. 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 AOR 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 AOR.

   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.

7. SITE EXAMINATION

   BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL 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 AOR 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.

8. 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.

9. 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).

10. FIRE STOPPING:

    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:

    ANY WORK INVOLVING A TASK WHICH EXPOSES ACTIVE BUS SHALL BE PERFORMED OUTSIDE OF NORMAL OPERATING HOURS (8:00AM TO 4:30PM). 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. WORK ON LIVE ELECTRICAL SYSTEMS IS ONLY ALLOWED BY WRITTEN PERMISSION BY THE DIRECTOR OF THE BUFFALO VAMC.

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 AT NO ADDITIONAL COST TO THE VA.

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. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO AOR FOR REVIEW.

    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. BALANCE ALL LOADS ON PANELBOARDS WITHIN 10% OF EACH OTHER. 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:

    CONTRACTOR 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.

18. 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 15 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 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 (15 OR 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) - WHITE
    3 DATA - YELLOW/GREEN/GRAY
    CLINICAL WIRELESS (OIT) - DARK GREEN
    VIDEO SURVEILLANCE - VIOLET
    NURSE CALL - BLUE
    FIRE ALARM - RED

    ALL CABLING SHALL BE HOSPITAL GRADE

22. CABLING SIZES:

    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" EXCEPT FOR DROPS FOR DEVICES, SWITCH LEGS, TEMPERATURE CONTROL CONDUITS, WHERE INDICATED OR AS CALLED FOR ON DRAWINGS. 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.

    WHERE POSSIBLE 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 (VERIFY FACILITY COLOR CODING).

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

    WHERE 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 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. IN ROOMS WITHOUT GENERAL ILLUMINATION ON EMERGENCY POWER, EMERGENCY RECEPTACLES SHALL BE OF THE SELF ILLUMINATED TYPE.

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. BY THE ELECTRICAL CONTRACTOR.

    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.

30. LABELING

    ALL BRANCH CIRCUIT JUNCTION BOXES SHALL HAVE CIRCUIT IDENTIFIED WITH BLACK MARKER. LABEL ALL DEVICE PLATES WITH A PERMANENT ADHESIVE LABEL LISTING PANEL AND CIRCUIT FEEDING THE DEVICE. PROVIDE EQUIPMENT IDENTIFICATION IN ACCORDANCE WITH SPECIFICATION SECTION 26 05 11 (1.11), AND IN ADDITION TO THESE REQUIREMENTS LABELS SHALL INDICATE PANEL AND CIRCUIT FEEDING EQUIPMENT.

ELECT DEMOLITION NOTES

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 MANDATORY 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 COR.

   IT IS MANDATORY THAT THE EXISTING ALL 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. ALL WORK REQUIRING LOTO SHALL BE COORDINATED IN ADVANCE WITH THE VA.

3. 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.

   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.

4. 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.

ISSUE FOR BID	08-09-2024
Revisions:	Date:

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STAMP

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VA U.S. Department of Veterans Affairs

Drawing Title	Phase	Project Title	Project Number
ELECTRICAL - GENERAL NOTES	ISSUE FOR BID	PARKING RAMP EXPANSION	528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number
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ELECTRICAL SYMBOLS - DIAGRAM

- INCOMING LINE
- GROUND
- DELTA CONNECTION
- WYE CONNECTION
- SURGE AND LIGHTNING ARRESTER
- POTHEAD
- STRESS CONE
- TRANSFORMER
- CONTACTOR
- EARTH GROUND
- PB — PULL BOX
- NORMALLY CLOSED RELAY CONTACT
- NORMALLY OPEN RELAY CONTACT
- FUSE WITH RATING
- MOLDED CASE CIRCUIT BREAKER
- LOW-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
- O.C.B. — MEDIUM-VOLTAGE OIL CIRCUIT BREAKER
- MEDIUM-VOLTAGE DRAWOUT AIR CIRCUIT BREAKER
- SWITCH AND FUSE UNIT
- FUSIBLE SWITCH
- FUSED DRAWOUT POTENTIAL TRANSFORMER
- CONTROL OR POTENTIAL TRANSFORMER
- CURRENT TRANSFORMER
- X — CABLE AND CONDUIT TAG SEE SCHEDULE
- X / Y — EQUIPMENT TAG SEE EQUIPMENT SCHEDULE
- ST — SHUNT TRIP
- A — AMMETER
- AS — AMMETER SELECTOR SWITCH
- V — VOLTMETER
- VS — VOLTMETER SELECTOR SWITCH
- M — UTILITY METER
- CM — OWNER METER
- KWH — KILOWATT HOUR METER
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR
- GF — GROUND FAULT

ELECTRICAL SYMBOL - POWER PLAN

- MOTOR, SINGLE-PHASE
- MOTOR, THREE-PHASE
- T — TRANSFORMER, PLAN
- WYE CONNECTION
- EARTH GROUND
- J — POWER JUNCTION BOX
- A/V — DOUBLE GANG DEEP AUDIO/VISUAL JUNCTION BOX
- C | C — LADDER CABLE TRAY
- HOMERUN TO PANELBOARDS. 4#10 + 1#12 GROUND IN 3/4" CONDUIT
- PB — PULL BOX
- W | W — WIREWAY
- REGULAR POWER
- LIFE SAFETY POWER
- CRITICAL POWER
- 208Y / 120 V NORMAL PANELBOARD
- 208Y / 120 V CRITICAL PANELBOARD
- 208Y / 120 V LIFE SAFETY PANELBOARD
- 208Y / 120 V EQUIPMENT PANELBOARD
- 480Y / 277 V NORMAL PANELBOARD
- 480Y / 277 V CRITICAL PANELBOARD
- 480Y / 277 V LIFE SAFETY PANELBOARD
- 480Y / 277 V EQUIPMENT PANELBOARD
- DISTRIBUTION SWITCHBOARD NORMAL
- DISTRIBUTION SWITCHBOARD CRITICAL
- DISTRIBUTION SWITCHBOARD LIFE SAFETY
- DISTRIBUTION SWITCHBOARD EQUIPMENT
- RECEPTACLE, DUPLEX
- RECEPTACLE, DUPLEX ON CRITICAL POWER
- RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER
- GFCI — RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER MOUNTED AT 44"
- RECEPTACLE, QUADRAPLEX
- RECEPTACLE, QUADRAPLEX ON CRITICAL POWER
- FLOOR RECEPTACLE, DUPLEX
- FLOOR RECEPTACLE, DUPLEX ON CRITICAL POWER
- FLOOR RECEPTACLE, QUADRAPLEX
- FLOOR RECEPTACLE, QUADRAPLEX ON CRITICAL POWER
- CEILING MOUNTED RECEPTACLE
- CEILING MOUNTED RECEPTACLE ON CRITICAL POWER
- L6-30R TWIST LOCK RECEPTACLE ON NORMAL POWER, 250V, TWO-POLE, 3W GROUNDED
- L6-30R TWIST LOCK RECEPTACLE ON CRITICAL POWER, 250V, TWO-POLE, 3W GROUNDED
- ELECTRICAL STRIP MOLD (OUTLETS ON 2'-0" CENTERS OR AS DESIGNATED ON DRAWINGS), MTD 3'-6" AFF OR AS INDICATED.
- PP — AUTOMATIC DOOR OPERATOR PUSH PLATE
- TC — TIME CLOCK
- CONDUIT STUBBED DOWN
- CONDUIT STUBBED UP
- FLEXIBLE CONDUIT
- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- LIMIT OF DEMOLITION
- JUNCTION BOX WITH DISCONNECT SWITCH AND FLEXIBLE CONDUIT CONNECTION
- EQUIPMENT CONNECTION
- EMERGENCY POWER OFF PUSHBUTTON
- BELL
- B — BUZZER
- DOCK DOOR POSITION INDICATOR LIGHT
- T — THERMOSTAT, WALL MOUNTED PULL CORD
- H — HUMIDISTAT, WALL MOUNTED
- T — THERMOSTAT

ELECTRICAL SYMBOLS - LIGHTING PLAN

- $2 — SWITCH. U.O.N. 1P, 20A
  BLANK = SINGLE POLE; 3 = THREE-WAY
  4 = FOUR-WAY; K = KEY OPERATED
  DM= DIMMER; P = WITH PILOT LIGHT
  LV= LOW VOLTAGE; TM = TIMER OPERATED
  WP=WEATHER PROOF; X = EXPLOSION PROOF
  T= THERMAL OVERLOAD PROTECTION; OS= OCCUPANCY SENSOR
- OS — SWITCH, OCCUPANCY SENSOR REFER TO FIXTURE SCHEDULE FOR TYPE
- PC — SWITCH, EXTERIOR PHOTO CELL FOR CONTROL OF EXTERIOR LIGHTING
- L PS — SWITCH, LAMP HOLDER POLE
- LIGHT FIXTURE RECESSED ROUND CEILING MOUNTED DOWNLIGHT
- LIGHT FIXTURE RECESSED SQUARE CEILING MOUNTED DOWNLIGHT
- LIGHT FIXTURE, RECESSED LED, 2'x4'
- LIGHT FIXTURE, RECESSED LED 1'x4'
- LIGHT FIXTURE, RECESSED LED, 2'x2'
- S — LIGHT FIXTURE, LED, 2'x4' LETTER INDICATES MOUNTING TYPE i.e. LETTER "S" INDICATES SURFACE MOUNTED.
- S — LIGHT FIXTURE, LED, 1'x4' LETTER INDICATES MOUNTING TYPE i.e. LETTER "S" INDICATES SURFACE MOUNTED.
- S — LIGHT FIXTURE, LED, 2'x2' LETTER INDICATES MOUNTING TYPE i.e. LETTER "S" INDICATES SURFACE MOUNTED.
- LIGHT FIXTURE, LED CRITICAL POWER
- LIGHT FIXTURE, LED LIFE SAFETY POWER
- LIGHT TRACK WITH HEADS AS SHOWN
- LIGHT FIXTURE, STRIP/INDUSTRIAL LED; LETTER INDICATES TYPE.
- LIGHTING, UNDERCABINET LIGHT/COVE LIGHT
- EMERGENCY BATTERY BACK-UP EGRESS LIGHT
- DOUBLE FACED CEILING OR WALL MOUNTED EXIT SIGN. ARROW INDICATES DIRECTION
- SINGLE FACED CEILING OR WALL MOUNTED EXIT SIGN. ARROW INDICATES DIRECTION
- LIGHT POLE, ONE MAST ARM, ONE LUMINAIRE
- LIGHT POLE, TWO MAST ARMS, TWO LUMINAIRES
- LIGHT POLE, POST TOP MOUNT LUMINAIRE
- LIGHT POLE, ONE LUMINAIRE
- LIGHT POLE, TWO LUMINAIRES
- LIGHTING WALL PACK - EXTERIOR BUILDING
- LIGHTING LANDSCAPE WALL
- LIGHT FIXTURE, BOLLARD, ROUND
- LIGHT FIXTURE, BOLLARD, SQAURE
- LIGHT FIXTURE, DIRECTIONAL

MOTORS AND CONTROLS

- XX — SINGLE PHASE MOTOR (HP AS INDICATED)
- XX — THREE PHASE (HP AS INDICATED)
- 30A/20A — DISCONNECT SWITCH, FUSED (SWITCH/FUSE RATING)
- 30A — DISCONNECT SWITCH, UNFUSED (SWITCH RATING)
- STARTER, COMBINATION WITH DISCONNECT SWITCH
- STARTER OR MOTOR CONTROLLER
- VFD — VARIABLE FREQUENCY DRIVE

FIRE ALARM SYMBOLS

- (F)SD — STANDARD, CEILING MOUNTED SMOKE DETECTOR
- (F)SSD — SOUNDER BASE, CEILING MOUNTED SMOKE DETECTOR
- (F)HD — RATE-OF-RISE STD, CEILING MOUNTED HEAT DETECTOR
- 135(F)HD — FIXED TEMP (135°), CEILING MOUNTED HEAT DETECTOR
- DUCT SMOKE DETECTOR W/REMOTE TEST STATION
  WP INDICATES WEATHERPROOF HOUSING FOR BOTH
- P — MANUAL PULL STATION WP-WEATHERPROOF HOUSING
- (F)HS — CEILING MOUNTED HORN/STROBE (A/V)
- (F)ST — CEILING MOUNTED STROBE
- (F)SP — CEILING MOUNTED FIRE ALARM SPEAKER
- (F)SPS — CEILING MOUNTED FIRE ALARM SPEAKER/STROBE
- F HS — WALL MOUNTED HORN/STROBE
- F ST — WALL MOUNTED STROBE
- F SP — WALL MOUNTED FIRE ALARM SPEAKER
- F SPS — WALL MOUNTED FIRE ALARM SPEAKER/STROBE
- CHIME
- FA — FIRE ALARM LINE = FA
- DH — ELECTROMAGNETIC TYPE DOOR HOLDER OUTLET
- TS — TEMPER SWITCH
- FS — FLOW SWITCH
- PS — PRESSURE SWITCH
- LS — LEVEL SWITCH
- VTS — VALVE TAMPER SWITCH
- VSS — VALVE SUPERVISORY SWITCH
- FACP — FIRE ALARM CONTROL PANEL
- MM — MONITOR MODULE
- CM — CONTROL MODULE
- FIRE FIGHTERS TELEPHONE JACK
- RTS/I — REMOTE TEST SWITCH W/INDICATOR
- Z — F.A. ZONE ADDRESSABLE MODULE
- I — F.A. INDIVIDUAL ADDRESSABLE MODULE
- F.A. DOOR HOLDER
- F.A. DOOR CLOSER
- FR — FIRE ALARM SHUT DOWN RELAY

ELECTRICAL ABBREVIATIONS

1PH	SINGLE-PHASE	EC	EMPTY CONDUIT	NEUT OR N	NEUTRAL
1P	SINGLE POLE	EG	EQUIPMENT GROUND	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
2/C	TWO-CONDUCTOR	EL	ELEVATION	NIC	NOT IN CONTRACT
3/C	THREE-CONDUCTOR	ELEC	ELECTRIC OR ELECTRICAL	NL	NIGHT LIGHT
3PH	THREE-PHASE	ELEV	ELEVATOR	NO	NORMALLY OPEN
4/C	FOUR-CONDUCTOR	EMCP	EMERGENCY MONITORING CONTROL PANEL	NS	NO SCALE
4W	FOUR-WIRE	EMER	EMERGENCY	NTS	NOT TO SCALE
		EMI	ELECTROMAGNETIC INTERFERENCE		
A/C UNIT	AIR CONDITIONING UNIT	EMT	ELECTRICAL METALLIC TUBING	OC	ON CENTER
A/E	ARCHITECT/ENGINEER	ENCL	ENCLOSURE	OD	OUTSIDE DIAMETER
AAP	ALARM ANNUNCIATOR PANEL	EPO	EMERGENCY POWER OFF	OL	OVERLOAD
AC	ALTERNATING CURRENT OR ARMORED CABLE	EPRF	EXPLOSION PROOF		
ACC	ACCESSIBLE	ESMT	EASEMENT	P	POLE
ADDL	ADDITIONAL	EWC	ELECTRIC WATER COOLER	PA	PUBLIC ADDRESS
ADJ	ADJACENT, ADJOINING	EWH	ELECTRIC WATER HEATER	PB	PANELBOARD, PULL BOX, OR PUSHBUTTON
ADO	AUTOMATIC DOOR OPENER	EXIST, EX	EXISTING	PBPU	PREFABRICATED BEDSIDE PATIENT UNIT
AF	AMPERE FRAME OR AMP FUSE			PCB	POLYCHLORINATED BIPHENYL
AFC	ABOVE FINISHED COUNTER, AUTOMATIC FREQUENCY CONTROL, OR AVAILABLE FAULT CURRENT	FA	FIRE ALARM	PEC	PHOTOELECTRIC CELL
		FAAP	FIRE ALARM ANNUNCIATOR PANEL	PED	PEDESTAL
AFF	ABOVE FINISHED FLOOR	FABL	FIRE ALARM BELL	PEND	PENDANT
AFG	ABOVE FINISHED GRADE	FABX	FIRE ALARM BOX	PF	POWER FACTOR
AH	AMPERE HOUR	FACP	FIRE ALARM CONTROL PANEL	PH	PHASE
AHJ	AUTHORITY HAVING JURISDICTION	FC	FOOTCANDLE	PNL	PANEL
AIC	AMPERE INTERRUPTING CAPACITY	FI	FILM ILLUMINATOR	POD	POWER OPERATED DAMPER
ALT	ALTERNATE	FIXT	FIXTURE	PT	POTENTIAL TRANSFORMER
AMB OR A	AMBIENT	FLA	FULL LOAD AMPS	PTRV	POWER TYPE ROOF VENTILATION
AMP	AMPERE	FLEX	FLEXIBLE METALLIC CONDUIT	PVC	POLYVINYL CHLORIDE (PLASTIC)
ARCH	ARCHITECT	FLT	FLOODLIGHT	PWR	POWER
ASC	AMPS SHORT CIRCUIT	FLUOR	FLUORESCENT		
AT	AMPERE TRIP	FLUOR FIX	FLUORESCENT FIXTURE	RCP	REFLECTED CEILING PLAN
ATS	AUTOMATIC TRANSFER SWITCH	FOUTT	TELEPHONE FLOOR OUTLET	REC	RECESSED
AOR	AREA OF RESPONSIBILITY	FP	FIRE PROTECTION	RECPT	RECEPTACLE
AUTO	AUTOMATIC	FT	FEET OR FOOT	RGS	RIGID GALVANIZED STEEL
AV	AUDIO VISUAL	FU SW	FUSED SWITCH	RM	ROOM
		FVNR	FULL VOLTAGE NON-REVERSING	RMS	ROOT MEAN SQUARE
BAT	BATTERY	FVR	FULL VOLTAGE REVERSING	REQD	REQUIRED
BC	BARE COPPER				
BD	BOARD	G OR GND	GROUND OR GENERATOR	SCC	SHORT CIRCUIT CAPACITY
BFF	BELOW FINISH FLOOR	GEN	GENERATOR	SES	SERVICE ENTRANCE SECTION
BIL	BASIC INSULATION LEVEL	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SD	SMOKE DETECTOR
BLDG	BUILDING	GTB	GROUND TERMINAL BOX	SF	SQUARE FOOT (FEET)
BPIP	BOILER PLANT INSTRUMENTATION PANEL			SHT	SHEET
BRKR	BREAKER	HID	HIGH INTENSITY DISCHARGE	SI	INTERNATIONAL SYSTEM OF UNITS
BYP	BY PASS	HOA	HAND-OFF-AUTOMATIC	SPEC	SPECIFICATION
		HP	HORSEPOWER	SPST	SINGLE POLE, SINGLE THROW
C	CONDUIT	HT	HEIGHT	SURF	SURFACE
CAB	CABINET	HZ	HERTZ	SW	SWITCH
CALC	CALCULATE			SWBD	SWITCHBOARD
CAP	CAPACITY	IESNA	ILLUMINATION ENGINEERING SOCIETY OF NORTH AMERICA	SWGR	SWITCHGEAR
CAT	CATALOG				
CATV	COMMUNITY ANTENNA TELEVISION	IMC	INTERMEDIATE METAL CONDUIT	TC	TIME CLOCK
CCR	CONTROL CONTACTOR	INCAND	INCANDESCENT	TEL	TELEPHONE
CCTV	CLOSED CIRCUIT TELEVISION	IR	INFRARED	TP	TWISTED PAIR
CB	CODE BLUE	IWH	INSTANTANEOUS WATER HEATER	TPS	TWISTED PAIR SHIELDED
cd	CANDELA			TTB	TELEPHONE TERMINAL BOARD
CD	CONSTRUCTION DOCUMENTS	J-BOX, JB	JUNCTION BOX	TV	TELEVISION
CF	CONTRACTOR FURNISHED			TYP	TYPICAL
CF/CI	CONTRACTOR FURNISHED/CONTRACTOR INSTALLED	kV	KILOVOLT		
CF/OI	CONTRACTOR FURNISHED/OWNER INSTALLED	kVA	KILOVOLT AMPERE	UFD	UNDERFLOOR DUCT
CFE	CONTRACTOR FURNISHED EQUIPMENT	kVAH	KILOVOLT AMPERE PER HOUR	UGND	UNDERGROUND
CHW	CHILLED WATER	kVAR	KILOVOLT AMPERE REACTIVE	UL	UNDERWRITERS LABORATORY
CHWP	CHILLED WATER PUMP	kW	KILOWATT	UON	UNLESS OTHERWISE NOTED
CKT	CIRCUIT	kWH	KILOWATT HOUR	UPS	UNINTERRUPTIBLE POWER SUPPLY
CKT BRKR	CIRCUIT BREAKER	kWHM	KILOWATT HOUR METER	UTIL	UTILITY
CLF	CURRENT LIMITING FUSE				
CLG	CEILING	LED	LIGHT EMITTING DIODE	V	VOLT
CMU	CONCRETE MASONRY UNIT	LF	LINEAR FEET (FOOT)	VA	VOLT AMPERE
COAX	COAX CABLE	LM	LUMEN	VAR	VOLT AMPERE REACTIVE
COMM	COMMUNICATION	LP	LIGHT POLE	VFD	VARIABLE FREQUENCY DRIVE
COMPT	COMPARTMENT	LPS	LOW PRESSURE SODIUM	VOLT	VOLTAGE
CONC	CONCRETE	LRA	LOCKED ROTOR AMPS		
CONT	CONTINUE	LTCP	LOCAL TEMPERATURE CONTROL PANEL	W	WATT
CONTR	CONTRACTOR	LT	LIGHT	WH	WATER HEATER
COORD	COORDINATE	LTG	LIGHTING	WP	WEATHERPROOF
CPT	CONTROL POWER TRANSFORMER	LTG PNL	LIGHTING PANEL		
CRI	COLOR RENDERING INDEX	LTNG	LIGHTNING	XFER	TRANSFER
CT	CURRENT TRANSFORMER	LV	LOW VOLTAGE	XFMR	TRANSFORMER
CTV	CABLE TELEVISION				
CU	COPPER	MATV	MASTER ANTENNA TELEVISION SYSTEM		
CU FT	CUBIC FEET	MAX	MAXIMUM		
CUR	CURRENT	MC	METAL-CLAD		
		MCA	MINIMUM CIRCUIT AMPS		
DB	DECIBEL OR DIRECT BURIAL	MCB	MAIN CIRCUIT BREAKER		
DC	DIRECT CURRENT	MCC	MOTOR CONTROL CENTER		
DCP	DIMMER CONTROL PANEL	MDP	MAIN DISTRIBUTION PANEL		
DEG C	DEGREES CELSIUS	MECH	MECHANICAL		
DEG F	DEGREES FAHRENHEIT	MG	MOTOR GENERATOR		
DEMO	DEMOLITION	MH	MANHOLE		
DIAG	DIAGRAM	MIN	MINIMUM		
DISC	DISCONNECT	MOCP	MAXIMUM OVERCURRENT PROTECTION		
DISTR	DISTRIBUTION	MLO	MAIN LUGS ONLY		
DISTR PNL	DISTRIBUTION PANEL	MT	MOUNT		
DMR SW	DIMMER SWITCH	MTD	MOUNTED		
DN	DOWN	MTG	MOUNTING		
DPDT	DOUBLE POLE, DOUBLE THROW	MTS	MANUAL TRANSFER SWITCH		
DPST	DOUBLE POLE, SINGLE THROW	MV	MEDIUM VOLTAGE		
DRSW	DOOR SWITCH	MVA	MEGAVOLT-AMPERE		
DS	DISCONNECT SWITCH	MW	MEGAWATT MICROWAVE		
DWG	DRAWING				
		NA	NOT APPLICABLE		
		NAC	NOTIFICATION APPLIANCES CIRCUIT PANEL		
		NEC	NATIONAL ELECTRICAL CODE		
		NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		

GENERAL NOTES

1. THIS IS A STANDARD LEGEND SHEET. SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.

ISSUE FOR BID	**08-09-2024**
Revisions:	**Date:**

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title ELECTRICAL - SYMBOLS AND ABBREVIATIONS	**Phase** ISSUE FOR BID	**Project Title** PARKING RAMP EXPANSION	**Project Number** 528-18-375
			Building Number 29
Approved: Project Director		**Location** 3495 BAILEY AVE., BUFFALO, NY 14215	**Drawing Number** E002
		Issue Date 08-09-2024 / **Checked** CC / **Drawn** FK	

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ELECTRICAL KEY NOTES

1. DISCONNECT AND REMOVE EXISTING LIGHT POLES. CONTRACTOR SHALL COORDINATE WITH VA TO SALVAGE EXISTING LUMINAIRE. CONTRACTOR SHALL SAW CUT CONDUIT BELOW GRADE, AND PROVIDE AND INSTALL NEW TRAFFIC RATED HANDHOLE AT THE FIXTURE LOCATION. CONTRACTOR SHALL THEN EXTEND NEW CONDUIT AND WIRES TO NEW FIXTURE LOCATION AS PER NEW WORK PLAN. COORDINATE WITH VA TO PROPERLY STORE LUMINAIRE AND LIGHT POLES. CONTRACTOR SHALL VRIFY THAT THIS WORK WILL NOT IMPACT OTHER LIGHTS ON THE EXISTING/SAME CIRCUIT. EXISTING CIRCUIT SHALL REMAIN IN SERVICE.
2. ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE EXISTING POWER TO EXISTING LIGHT POLE. COORDINATE WITH GC AND CIVIL FOR PATHCING/REPAIR OF PAVEMENT AND ADDITIONAL INFORMATION.
3. GUARD SHACK BEING REMOVED. EXISTING OVERHEAD POWER FEED SHALL BE REMOVED. THIS INCLIDES REMOVAL OF THE POWER POLE ITSELF. REMOVE WIRE BACK TO ADJACENT BUILDING. REMOVE WEATHERHEAD AND CUT MAST ABOVE ROOF. CAP AND SEAL MAST TO BE WEATHERTIGHT. REMOVE ALL ABANDONED CONDUCTORS BACK TO SOURCE.

MAST ON ROOF OF ADJACENT BUILDING

GUARD BOOTH

OVERHEAD POWER POLE AND LOAD CENTER

CONTRACTOR STAGING AREA

1 ELECTRICAL - SITE LIGHTING DEMOLITION PLAN
NTS

ISSUE FOR BID	08-09-2024
Revisions:	Date:

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VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL - SITE LIGHTING DEMOLITION PLAN	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: ESD101
		Issue Date: 08-09-2024 / Checked: CC / Drawn: FK	

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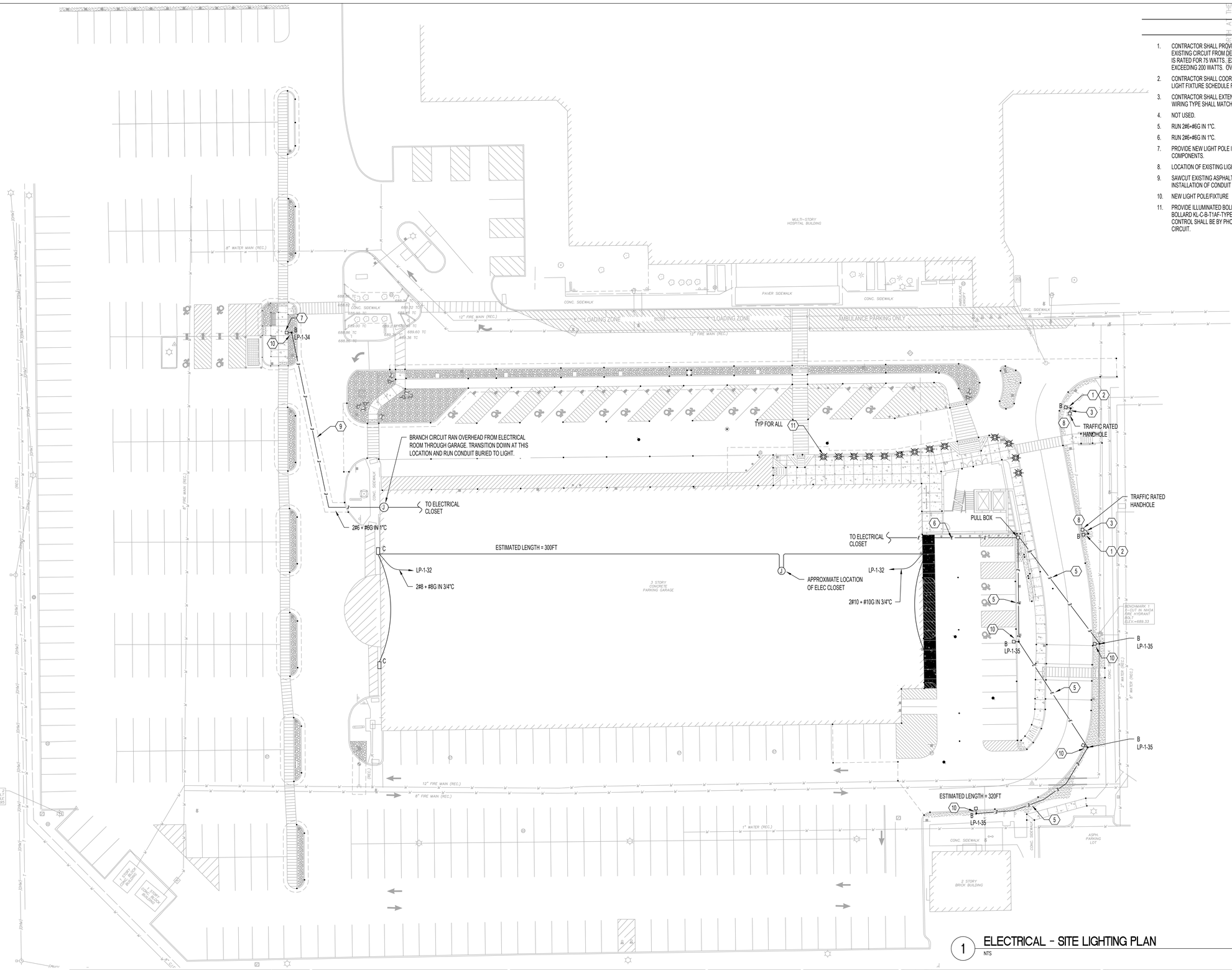

ELECTRICAL KEY NOTES

1. CONTRACTOR SHALL PROVIDE NEW 20'-0" LIGHT POLES. REFER TO LIGHT FIXTURE SCHEDULE FOR POLE INFORMATION. UTILIZE EXISTING CIRCUIT FROM DEMOLITION. EXTEND CONDUIT AND WIRING AS REQUIRED. WIRING TYPE TO MATCH EXISTING. NEW FIXTURE IS RATED FOR 75 WATTS. EXISTING FIXTURE BEING REMOVED WAS NOTED IN THE FIELD AS BEING HPS, AND HAVING A WATTAGE EXCEEDING 200 WATTS. OVERALL WATTAGE ON EXISTING BRANCH CIRCUIT IS BEING REDUCED.
2. CONTRACTOR SHALL COORDINATE WITH VA PRIOR TO ORDERING TO KEEP HISTORICAL AESTHETICS APPEARANCE TO VA. REFER TO LIGHT FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.
3. CONTRACTOR SHALL EXTEND UNDERGROUND CONDUIT AND WIRING FROM NEAREST HANDHOLE / PULLBOX AS SHOWN. CONDUIT AND WIRING TYPE SHALL MATCH EXISTING. CIRCUITING AND CONTROL SHALL BE AS PER EXISTING.
4. NOT USED.
5. RUN 2#6+#6G IN 1"C.
6. RUN 2#6+#6G IN 1"C.
7. PROVIDE NEW LIGHT POLE IN NEW TRAFFIC AND PEDESTRIAN ISLANDS. BID DEDUCT #1: DELETE LIGHT POLE AND ALL ASSOCIATED COMPONENTS.
8. LOCATION OF EXISTING LIGHT POLE REMOVED DURING DEMO. INSTALL HANDHOLE AT OLD LIGHT POLE LOCATION.
9. SAWCUT EXISTING ASPHALT TO INSTALL CONDUIT TO NEW LIGHT POLE LOCATION. FOLLOW ALL NEC AND VA REQUIREMENTS FOR INSTALLATION OF CONDUIT BELOW GRADE.
10. NEW LIGHT POLE/FIXTURE
11. PROVIDE ILLUMINATED BOLLARD AS FOLLOWS. OR APPROVED EQUAL. BOLLARD SHALL BE BY STRESSCRETE GROUP. KING LIGHTED BOLLARD KL-C-B-T1AF-TYPE V-LED55-SSL-4001-277-540-FBP. INSTALL BASE PLATE WITH ANCHOR BOLTS AT FINISH GRADE. FIXTURE CONTROL SHALL BE BY PHOTOCELL AND TIMECLOCK. CIRCUIT BOLLARDS TO LP-1-35 AND CONTROL SAME AS LIGHT POLES ON SAME CIRCUIT.

1 ELECTRICAL - SITE LIGHTING PLAN

NTS

ISSUE FOR BID	08-09-2024
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Drawing Title: ELECTRICAL - SITE LIGHTING PLAN	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: ES101
		Issue Date: 08-09-2024 / Checked: CC / Drawn: FK	

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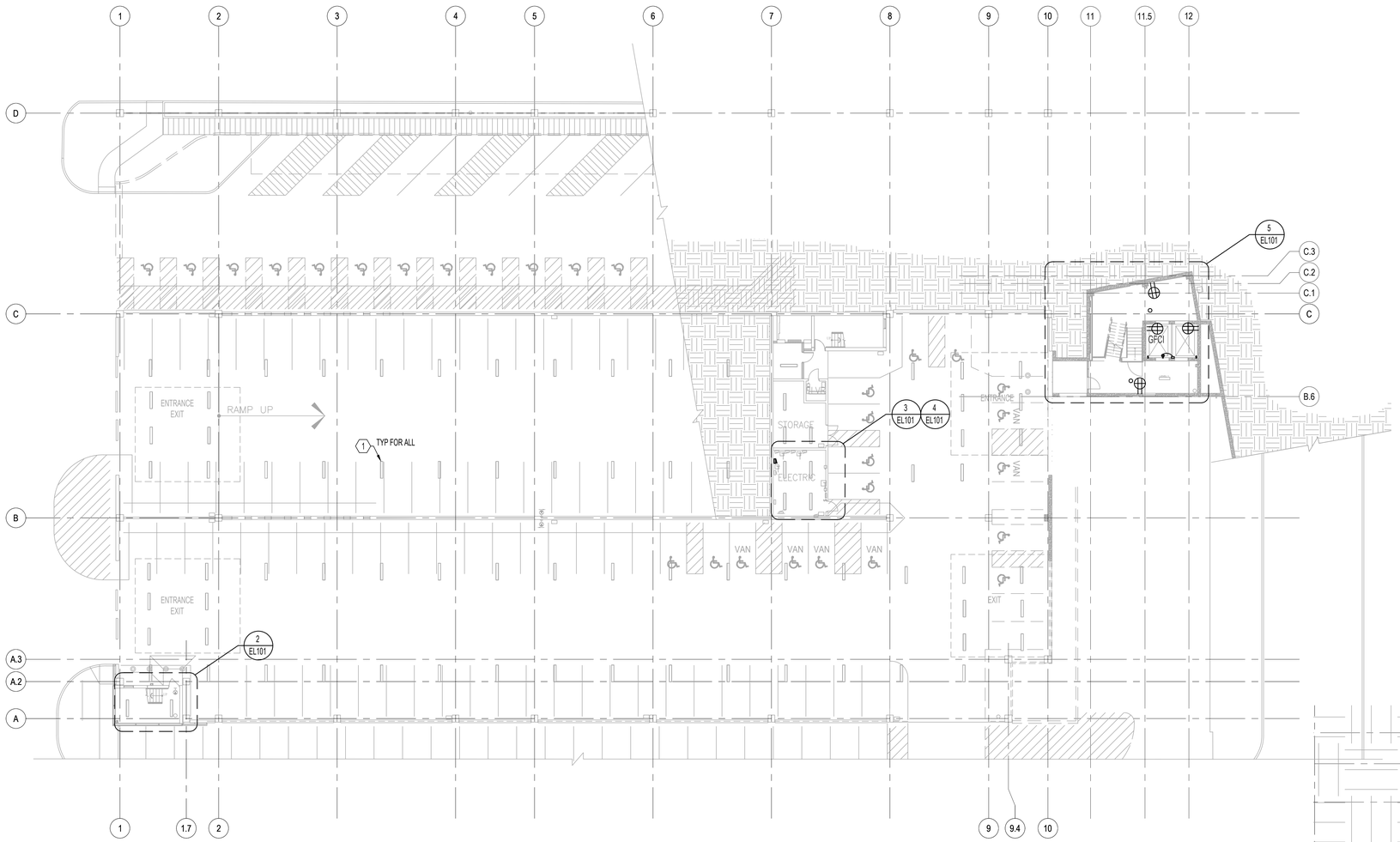
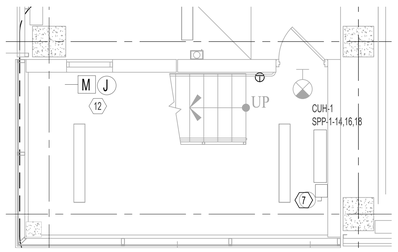


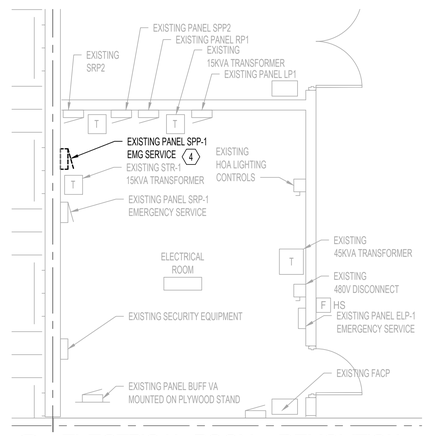
1 ELECTRICAL - LIGHTING FLOOR PLAN - LEVEL 1

1/16"=1'-0"



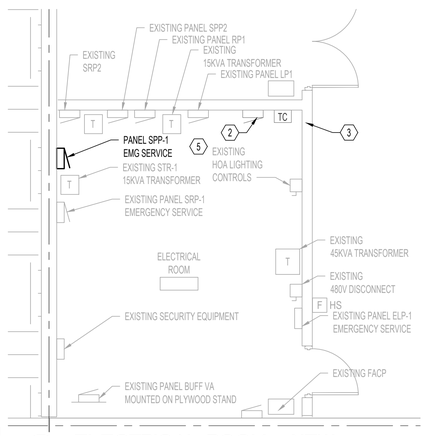
2 STAIR TOWER 2 ELECTRICAL PLAN - LEVEL 1

1/4"=1'-0"



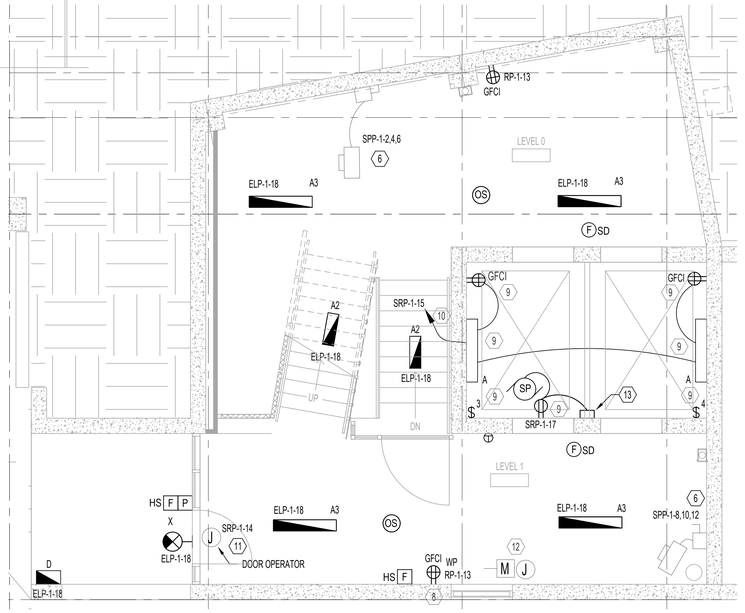
3 ELECTRICAL ROOM - DEMOLITION

1/4"=1'-0"



4 ELECTRICAL ROOM - NEW

1/4"=1'-0"



5 ELEVATOR PIT / ELEVATOR LOBBY LEVELS 0 + 1

1/4"=1'-0"

ELECTRICAL GENERAL NOTES

A. REFER TO E001 AND E002 FOR SYMBOLS, AEAREVIATIONS AND ADDITIONAL NOTES.

B. UNLESS OTHERWISE NOTED, COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS.

C. EXISTING CONDITIONS BASED ON FIELD OBSERVATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO DISTURBING EXISTING INSTALLATION.

D. PROVIDE JUNCTION BOXES, WIRE, CABLING, CONDUIT, ETC. AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING DEVICES, EQUIPMENT, ETC. WHICH ARE TO REMAIN.

E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS REQUIRED TO KEEP THE PROJECT PROGRESSING.

F. REFER TO LIGHT FIXTURE SCHEDULES FOR ADDITIONAL INFORMATION.

G. CIRCUIT CONTINUITY SHALL BE MAINTAINED TO ALL AREAS NOT PART OF THE PROJECT DURING AND AFTER CONSTRUCTION. PROVIDE TEMPORARY POWER DURING CONSTRUCTION.

H. LEVELS 1 THRU 3 ARE EXISTING, LEVELS 4 AND 5 ARE NEW. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.

I. ALL LIGHT FIXTURES SHALL BE CONTROLLED BY TIME CLOCK LOCATED IN THE ELECTRICAL ROOM.

ELECTRICAL KEY NOTES

1. EXISTING LIGHT FIXTURE TO REMAIN. MAINTAIN EXISTING NORMAL AND EMERGENCY LIGHTING CIRCUITS.
2. CONTRACTOR SHALL PROVIDE ADDITIONAL SPACE FOR NEW PANELBOARD FOR FUTURE EV PANEL. REFER TO ONE-LINE FOR ADDITIONAL INFORMATION.
3. PROVIDE NEW PWRLY DMX 20-AMP (OR APPROVED EQUAL) 16 RELAY LIGHTING PANEL OR APPROVED EQUAL.
4. DISCONNECT AND REMOVE EXISTING PANEL SPP1. NAME PLATE SHOWING SSP-1 IS INCORRECT. REFER TO ONE-LINE DIAGRAM FOR CIRCUIT TO BE RE-FED. BRANCH CIRCUITS RELEASED FROM SERVICE DUE TO DEMOLITION SHALL BE FULLY REMOVED.
5. PROVIDE NEW 200A PANELBOARD. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
6. PROVIDE 480V/3PH CONNECTION TO 10KW EUH. DISCONNECT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. LOCATE SWITCH ON ADJACENT WALL. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN AND INSTALLATION. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF HEATER.
7. PROVIDE 480V/3PH CONNECTION TO CUH-1. DISCONNECT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. LOCATE SWITCH ON ADJACENT WALL. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN AND INSTALLATION. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF HEATER.
8. PROVIDE GFCI/WEATHER PROOF RECEPTACLE WITH WHILE IN USE LOCKABLE COVER.
9. ELECTRICAL WORK SHOWN IS IN ELEVATOR PIT/LEVEL 0.
10. CIRCUITING AND CONTROL EXTENDS TO DRAWING EL105; CONTROL ALL SHAFT LIGHTS TOGETHER.
11. PROVIDE 120V CIRCUIT FOR DOOR OPERATOR AND WIRE PER MANUFACTURER INSTRUCTIONS. COORDINATE DOOR CONTROL REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.
12. MOTORIZED DAMPER BY MECHANICAL CONTRACTOR. PROVIDE CONDUIT FROM EXHAUST FAN ON ROOF FOR LOW VOLTAGE CONTROL POWER TO DAMPER. REFER TO MECHANICAL PLANS AND COORDINATE WITH MECHANICAL CONTRACTOR.
13. SUMP PUMP ALARM PANEL MOUNTED TO ELEVATOR PIT WALL. COORDINATE LOCATION OF ALARM PANEL, RECEPTACLE, AND ALL CONNECTION REQUIREMENTS WITH PLUMBING CONTRACTOR.

ISSUE FOR BID	08-09-2024
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL - LIGHTING FLOOR PLAN - LEVEL 1	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: EL101
		Issue Date: 08-09-2024 / Checked: CC / Drawn: FK	

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ELECTRICAL GENERAL NOTES

A. REFER TO E001 AND E002 FOR SYMBOLS, AEAREVIATIONS AND ADDITIONAL NOTES.

B. UNLESS OTHERWISE NOTED, COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS.

C. EXISTING CONDITIONS BASED ON FIELD OBSERVATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REPORT DISCREPANCIES TO THE AOR PRIOR TO DISTURBING EXISTING INSTALLATION.

D. PROVIDE JUNCTION BOXES, WIRE, CABLING, CONDUIT, ETC. AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING DEVICES, EQUIPMENT, ETC. WHICH ARE TO REMAIN.

E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS REQUIRED TO KEEP THE PROJECT PROGRESSING.

F. REFER TO LIGHT FIXTURE SCHEDULES FOR ADDITIONAL INFORMATION.

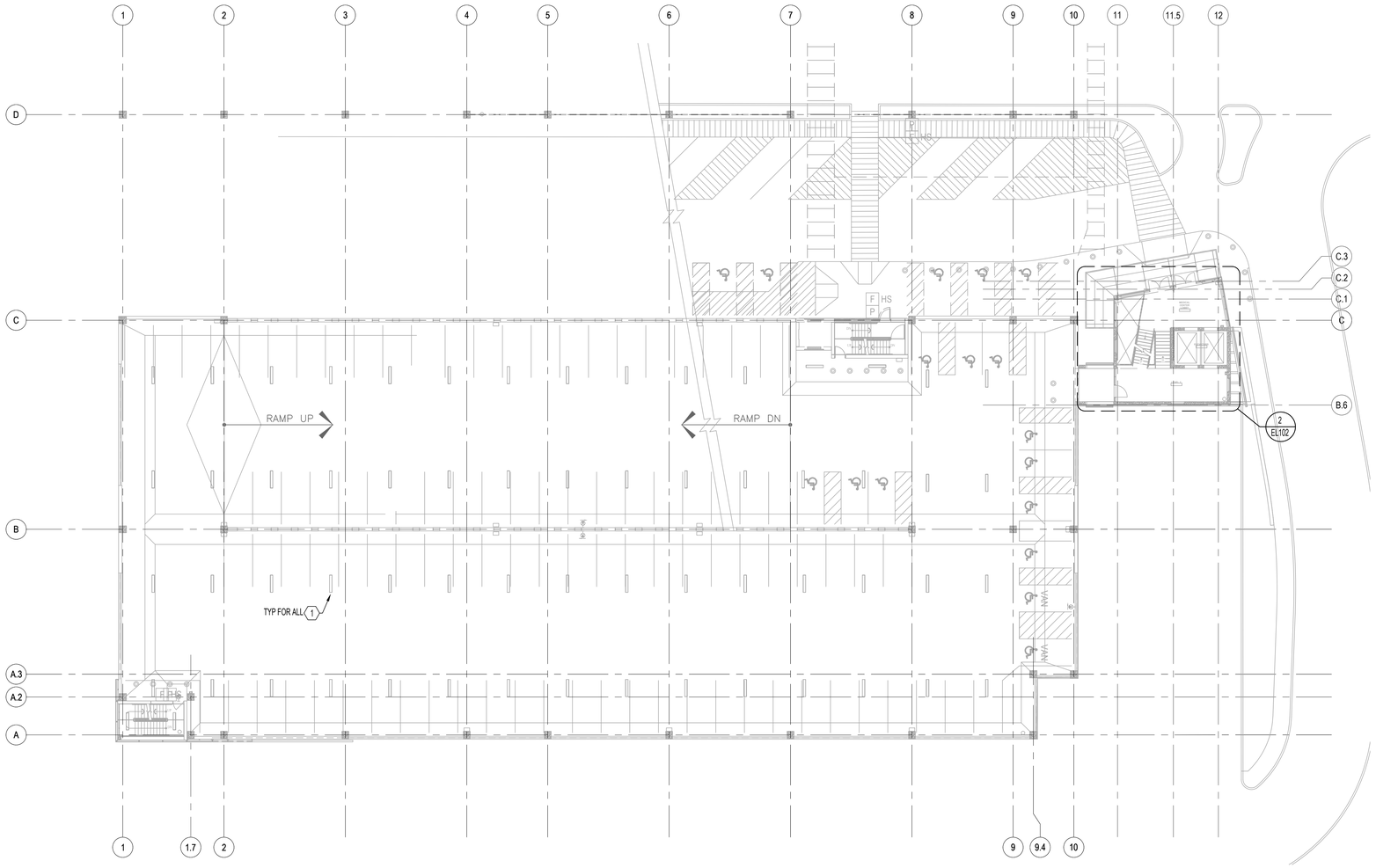
G. CIRCUIT CONTINUITY SHALL BE MAINTAINED TO ALL AREAS NOT PART OF THE PROJECT DURING AND AFTER CONSTRUCTION. PROVIDE TEMPORARY POWER DURING CONSTRUCTION.

H. LEVELS 1 THRU 3 ARE EXISTING, LEVELS 4 AND 5 ARE NEW. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.

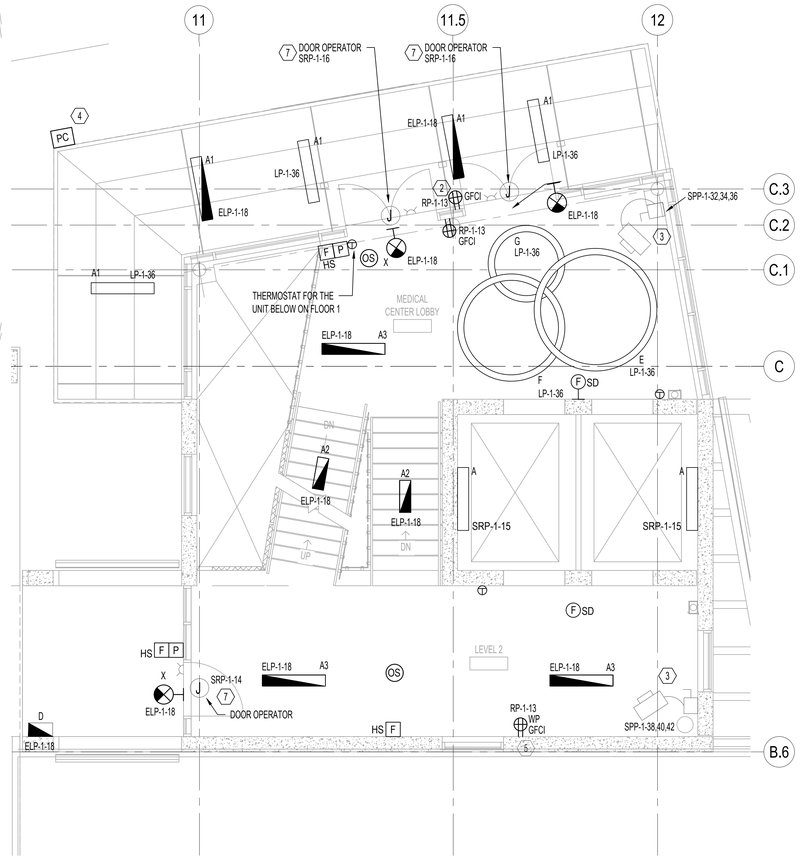
I. ALL LIGHT FIXTURES SHALL BE CONTROLLED BY TIME CLOCK LOCATED IN THE ELECTRICAL ROOM.

⟨X⟩ ELECTRICAL KEY NOTES

1. EXISTING LIGHT FIXTURES TO REMAIN. MAINTAIN EXISTING NORMAL AND EMERGENCY LIGHTING CIRCUITS.
2. PROVIDE EXTERIOR WEATHERPROOF GFCI RECEPTACLE AND LED WALL PACK FIXTURE. LED WALL PACKS SHALL ALSO BE INSTALLED ON OTHER SIDE OF BOTH SETS OF DOOR (ON THE EXTERIOR) FOR A TOTAL OF 3 WALL PACKS. WIRE TOGETHER ON SAME CIRCUIT.
3. PROVIDE 480V/3PH CONNECTION TO 10KW EUH. DISCONNECT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. LOCATE SWITCH ON ADJACENT WALL. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN AND INSTALLATION. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF HEATER.
4. EXTERIOR CANOPY LIGHT FIXTURES AND ILLUMINATED BOLLARDS SHALL BE CONTROLLED BY TIMECLOCK AND PHOTO CELL.
5. PROVIDE GFCI/WEATHER PROOF RECEPTACLE WITH WHILE IN USE LOCKABLE COVER.
6. PROVIDE ILLUMINATED BOLLARD AS FOLLOWS, OR APPROVED EQUAL. BOLLARD SHALL BE BY STRESSCRETE GROUP, KING LIGHTED BOLLARD KL-C-B-T1AF-TYPE V-LED55-SSL-4001-277-S40-FBP. INSTALL BASE PLATE WITH ANCHOR BOLTS AT FINISH GRADE. FIXTURE CONTROL SHALL BE BY PHOTOCELL AND TIMECLOCK. CIRCUIT BOLLARDS TO LP-1-35 AND CONTROL SAME AS LIGHT POLES ON SAME CIRCUIT.
7. PROVIDE 120V CIRCUIT FOR DOOR OPERATOR AND WIRE PER MANUFACTURER INSTRUCTIONS. COORDINATE DOOR CONTROL REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.



1 ELECTRICAL - LIGHTING FLOOR PLAN - LEVEL 2
1/16"=1'-0"



2 ELEVATOR LOBBY LEVELS MEDICAL CENTER + 2
1/4"=1'-0"

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VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL - LIGHTING FLOOR PLAN - LEVEL 2	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: EL102
		Issue Date: 08-09-2024 / Checked: CC / Drawn: FK	

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ELECTRICAL GENERAL NOTES

A. REFER TO E001 AND E002 FOR SYMBOLS, AEAREVIATIONS AND ADDITIONAL NOTES.

B. UNLESS OTHERWISE NOTED, COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS.

C. EXISTING CONDITIONS BASED ON FIELD OBSERVATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO DISTURBING EXISTING INSTALLATION.

D. PROVIDE JUNCTION BOXES, WIRE, CABLING, CONDUIT, ETC. AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING DEVICES, EQUIPMENT, ETC. WHICH ARE TO REMAIN.

E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS REQUIRED TO KEEP THE PROJECT PROGRESSING.

F. REFER TO LIGHT FIXTURE SCHEDULES FOR ADDITIONAL INFORMATION.

G. CIRCUIT CONTINUITY SHALL BE MAINTAINED TO ALL AREAS NOT PART OF THE PROJECT DURING AND AFTER CONSTRUCTION. PROVIDE TEMPORARY POWER DURING CONSTRUCTION.

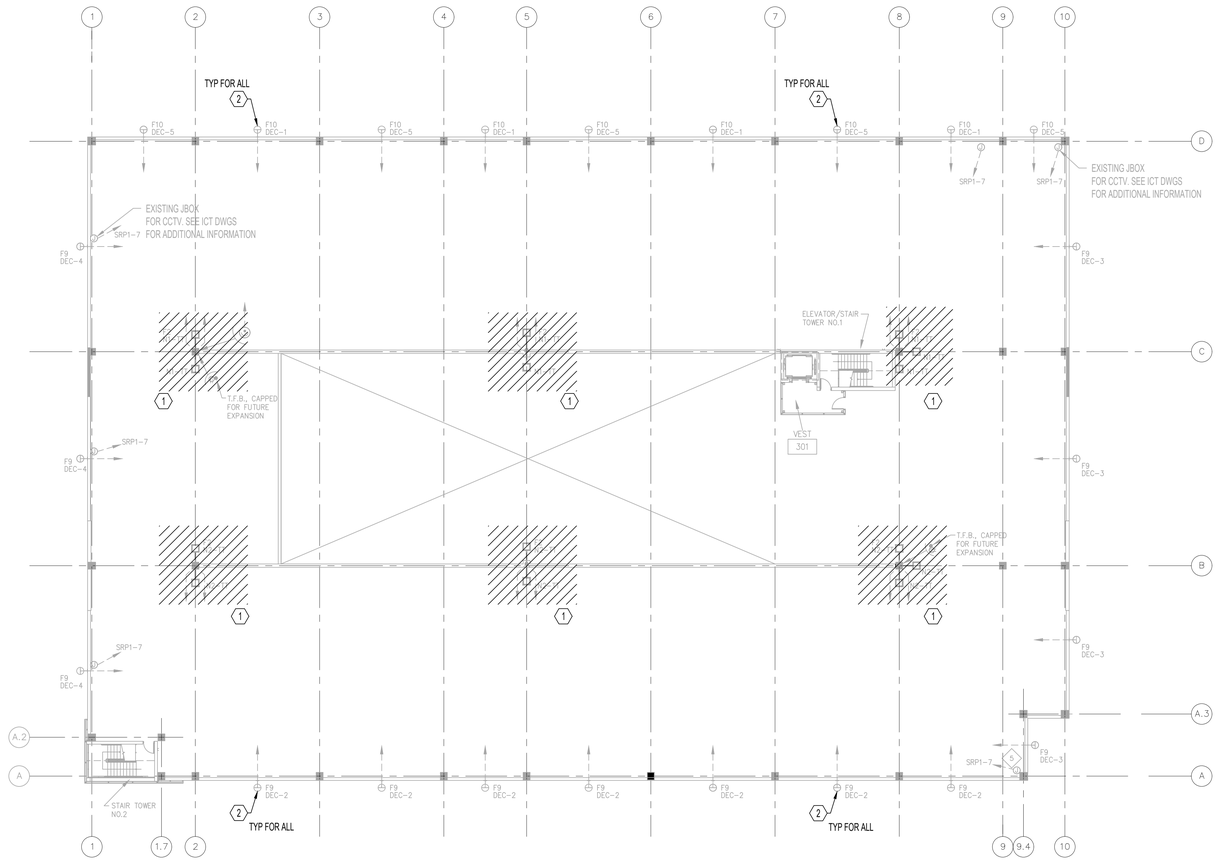
H. LEVELS 1 THRU 3 ARE EXISTING, LEVELS 4 AND 5 ARE NEW. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.

I. ALL LIGHT FIXTURES SHALL BE CONTROLLED BY TIME CLOCK LOCATED IN THE ELECTRICAL ROOM.

(X) ELECTRICAL KEY NOTES

1. REMOVE EXISTING LIGHT POLES FROM LEVEL 3 AND SALVAGE FOR REINSTALLATION . IF SOLAR PANELS ARE DEDUCTED. CONTRACTOR SHALL EXTEND CONDUIT AND WIRING TO LEVEL 5 AND REINSTALL EXISTING LIGHT POLES. CONTRACTOR SHALL CLEAN LENS AND RE-LAMP (IF REQUIRED). IF SOLAR PANELS ARE INCLUDED IN SCOPE OF WORK, CONTRACTOR SHALL SAW CUT AND CAP CONDUIT TO GRADE, AND REMOVE ABANDONED CONDUCTORS BACK TO SOURCE. SAFELY SECURE AND STORE LIGHT POLES TO BE UTILIZED AT A LATER TIME. COORDINATE WITH VA TO PROPERLY STORE LUMINAIRE AND LIGHT POLES.

2. EXISTING EXTERIOR LIGHTING TO REMAIN.



N

1 ELECTRICAL - LIGHTING FLOOR DEMOLITION PLAN - LEVEL 3

1/16"=1'-0"

ISSUE FOR BID	08-09-2024
Revisions:	Date:

CONSULTANT

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VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL - LIGHTING FLOOR DEMOLITION PLAN - LEVEL 3	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Building Number: 29
		Issue Date: 08-09-2024 / Checked: CC / Drawn: FK	Drawing Number: ELD103

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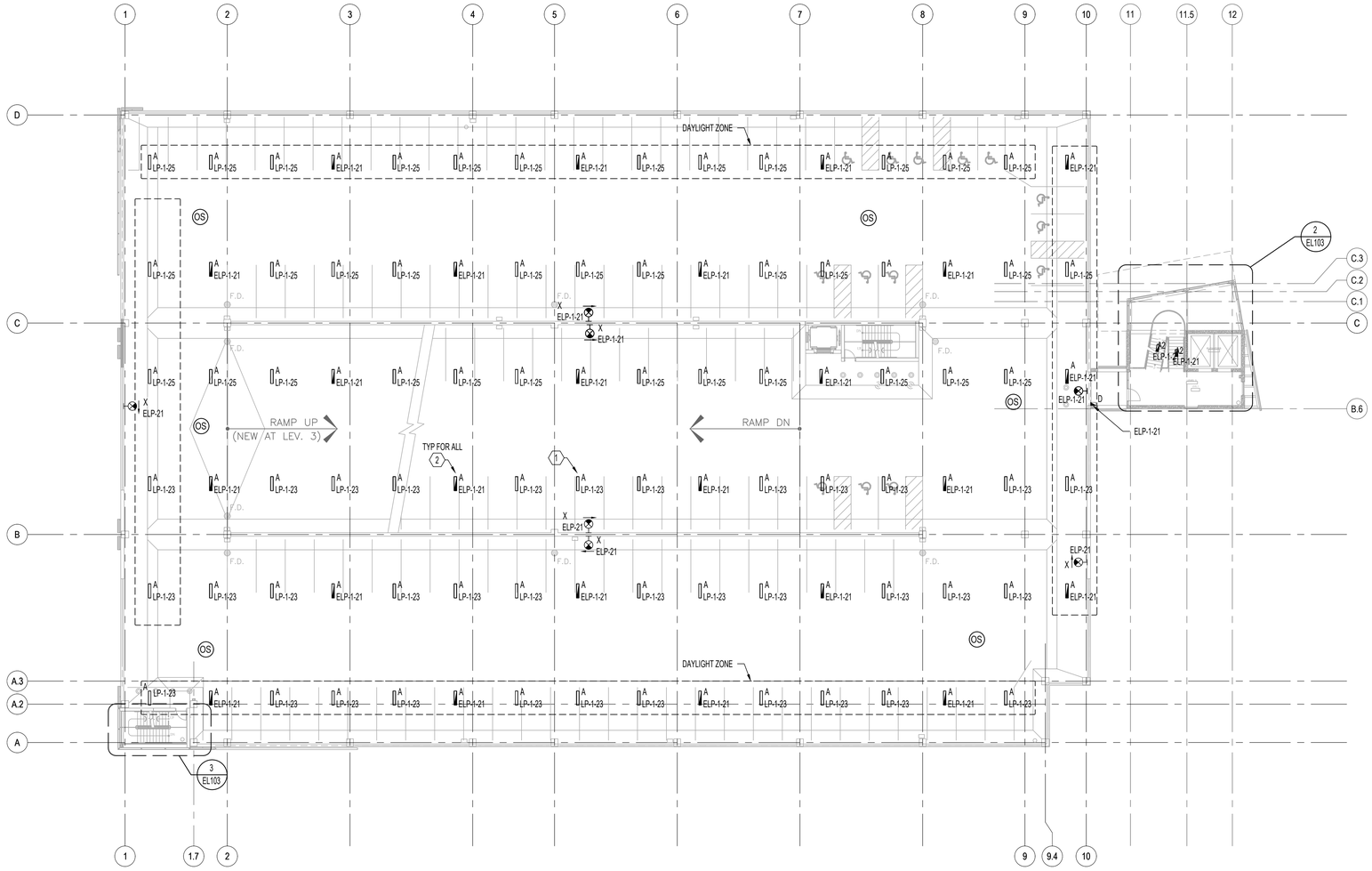
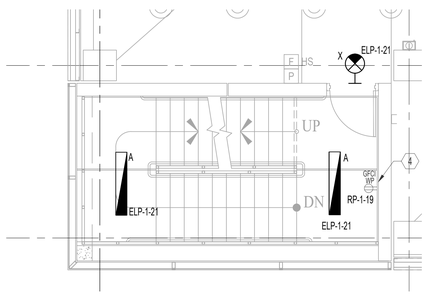


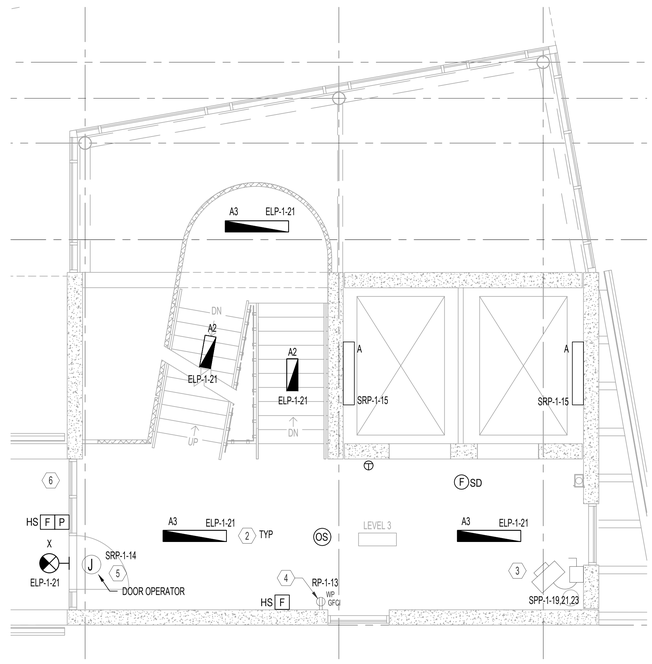
ELECTRICAL - LIGHTING FLOOR PLAN - LEVEL 3

1/16"=1'-0"



STAIR TOWER 2 ELECTRICAL PLAN - LEVEL 3

1/4"=1'-0"



ELEVATOR LOBBY LEVEL 3

1/4"=1'-0"

ELECTRICAL GENERAL NOTES

A. REFER TO E001 AND E002 FOR SYMBOLS, AELP-21REVIATIONS AND ADDITIONAL NOTES.

B. UNLESS OTHERWISE NOTED, COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS.

C. EXISTING CONDITIONS BASED ON FIELD OBSERVATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO DISTURBING EXISTING INSTALLATION.

D. PROVIDE JUNCTION BOXES, WIRE, CABLING, CONDUIT, ETC. AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING DEVICES, EQUIPMENT, ETC. WHICH ARE TO REMAIN.

E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS REQUIRED TO KEEP THE PROJECT PROGRESSING.

F. REFER TO LIGHT FIXTURE SCHEDULES FOR ADDITIONAL INFORMATION.

G. CIRCUIT CONTINUITY SHALL BE MAINTAINED TO ALL ARELP-21S NOT PART OF THE PROJECT DURING AND AFTER CONSTRUCTION. PROVIDE TEMPORARY POWER DURING CONSTRUCTION.

H. LEVELS 1 THRU 3 ARE EXISTING, LEVELS 4 AND 5 ARE NEW. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.

I. ALL LIGHT FIXTURES SHALL BE CONTROLLED BY TIME CLOCK LOCATED IN THE ELECTRICAL ROOM.

ELECTRICAL KEY NOTES

1. NEW LIGHTS TO BE MOUNTED BELOW RAMP OF UPPER LEVEL.
2. ALL EMERGENCY LIGHTING SHALL BE CIRCUITED TO EXISTING PANEL 'ELP-1-21'.
3. PROVIDE 480V/3PH CONNECTION TO 10KW EUH. DISCONNECT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. MOUNT SWITCH ON ADJACENT WALL. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN AND INSTALLATION. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF HEATER.
4. PROVIDE GFCI/WEATHER PROOF RECEPTACLE WITH WHILE IN USE LOCKABLE COVER.
5. PROVIDE 120V CIRCUIT FOR DOOR OPERATOR AND WIRE PER MANUFACTURER INSTRUCTIONS. COORDINATE DOOR CONTROL REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.
6. REFER TO FLOOR PLAN/VIEWPORT #1 FOR LOCATION OF LIGHT FIXTURE "D" IN THIS HALLWAY.

PARKING GARAGE LIGHTING CONTROLS

LIGHTING FOR PARKING GARAGES SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

A. LIGHTING POWER OF EACH LUMINAIRE SHALL BE AUTOMATICALLY REDUCED BY A MINIMUM OF 30% WHEN THERE IS NO ACTIVITY DETECTED WITHIN A LIGHTING ZONE FOR 20 MINUTES. LIGHTING ZONES FOR THIS REQUIREMENT SHALL BE NO LARGER THAN 3600 FT2.

B. LIGHTING FOR COVERED VEHICLE ENTRANCES AND EXITS FROM BUILDINGS AND PARKING STRUCTURES SHALL BE SEPARATELY CONTROLLED BY A DEVICE THAT AUTOMATICALLY REDUCES THE LIGHTING BY AT LEAST 50% FROM SUNSET TO SUNRISE.

C. THE POWER TO LUMINAIRES WITHIN 20 FT OF ANY PERIMETER WALL STRUCTURE THAT HAS A NET OPENING-TO-WALL RATIO OF AT LEAST 40% AND NO EXTERIOR OBSTRUCTIONS WITHIN 20 FT, SHALL BE AUTOMATICALLY REDUCED IN RESPONSE TO DAYLIGHT BY AT LEAST 50%.

ISSUE FOR BID	08-09-2024
Revisions:	Date:

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8/9/2024
STATE OF ILLINOIS

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title	ELECTRICAL - LIGHTING FLOOR PLAN - LEVEL 3
Phase	ISSUE FOR BID
Project Title	PARKING RAMP EXPANSION
Project Number	528-18-375
Building Number	29
Approved: Project Director	
Location	3495 BAILEY AVE., BUFFALO, NY 14215
Issue Date	08-09-2024
Checked	CC
Drawn	FK
Drawing Number	EL103

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ELECTRICAL GENERAL NOTES

A. REFER TO E001 AND E002 FOR SYMBOLS, AEAREVIATIONS AND ADDITIONAL NOTES.

B. UNLESS OTHERWISE NOTED, COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS.

C. EXISTING CONDITIONS BASED ON FIELD OBSERVATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO DISTURBING EXISTING INSTALLATION.

D. PROVIDE JUNCTION BOXES, WIRE, CABLING, CONDUIT, ETC. AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING DEVICES, EQUIPMENT, ETC. WHICH ARE TO REMAIN.

E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS REQUIRED TO KEEP THE PROJECT PROGRESSING.

F. REFER TO LIGHT FIXTURE SCHEDULES FOR ADDITIONAL INFORMATION.

G. CIRCUIT CONTINUITY SHALL BE MAINTAINED TO ALL AREAS NOT PART OF THE PROJECT DURING AND AFTER CONSTRUCTION. PROVIDE TEMPORARY POWER DURING CONSTRUCTION.

H. LEVELS 1 THRU 3 ARE EXISTING, LEVELS 4 AND 5 ARE NEW. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.

I. ALL LIGHT FIXTURES SHALL BE CONTROLLED BY TIME CLOCK LOCATED IN THE ELECTRICAL ROOM.

(X) ELECTRICAL KEY NOTES

1. PROVIDE GFCI/WEATHER PROOF RECEPTACLE WITH WHILE IN USE LOCKABLE COVER.
2. NEW LIGHTS TO BE MOUNTED BELOW RAMP OF UPPER LEVEL.
3. ALL EMERGENCY LIGHTING SHALL BE CIRCUITED TO EXISTING PANEL 'ELP-1-23'.
4. PROVIDE 480V/3PH CONNECTION TO 10KW EUH. DISCONNECT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. LOCATE SWITCH ON ADJACENT WALL. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN AND INSTALLATION. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF HEATER.
5. PROVIDE 120V CIRCUIT FOR DOOR OPERATOR AND WIRE PER MANUFACTURER INSTRUCTIONS. COORDINATE DOOR CONTROL REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.
6. REFER TO FLOOR PLAN/VIEWPORT #1 FOR LOCATION OF LIGHT FIXTURE "D" IN THIS HALLWAY.

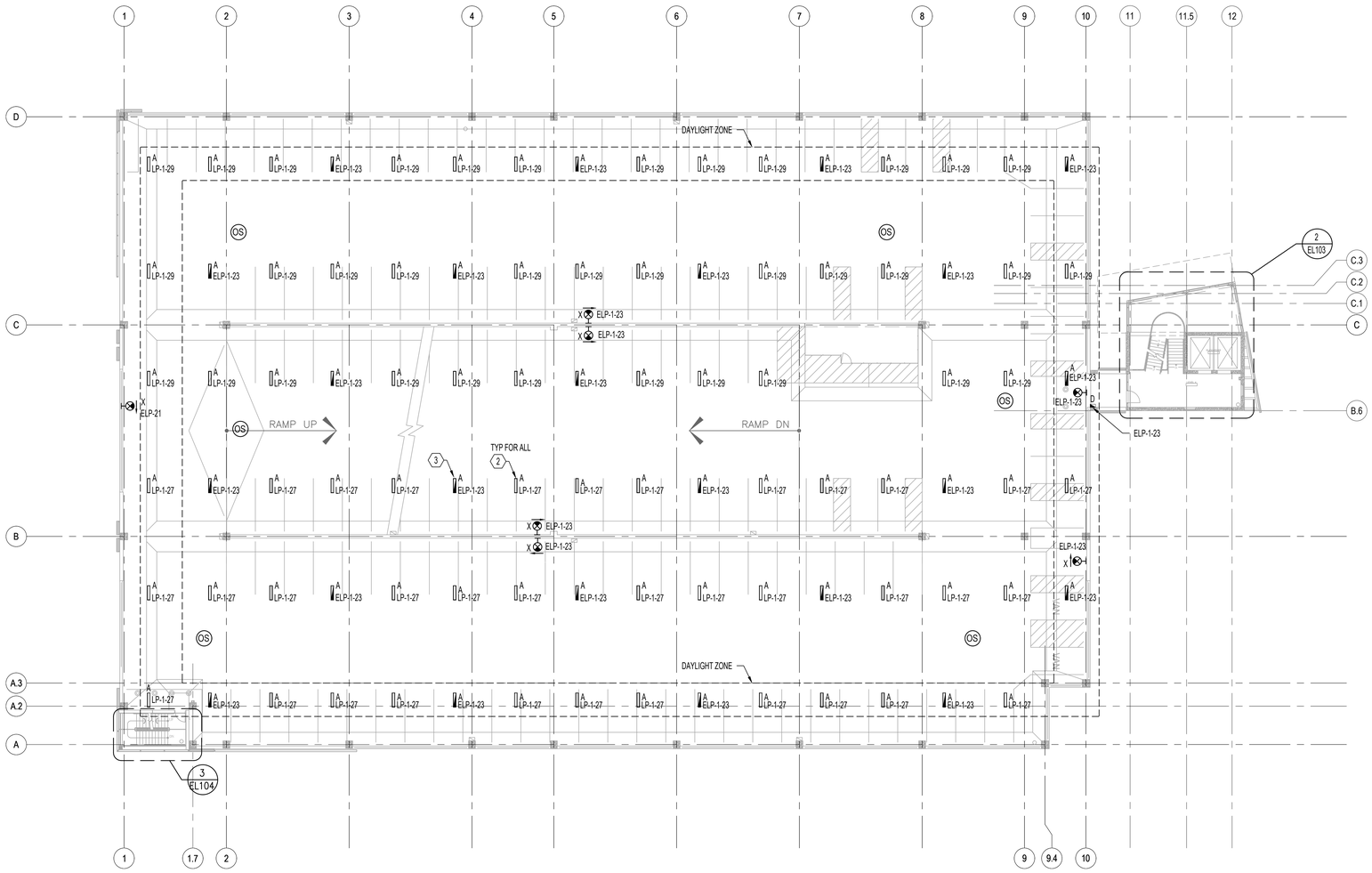
PARKING GARAGE LIGHTING CONTROLS

LIGHTING FOR PARKING GARAGES SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

A. LIGHTING POWER OF EACH LUMINAIRE SHALL BE AUTOMATICALLY REDUCED BY A MINIMUM OF 30% WHEN THERE IS NO ACTIVITY DETECTED WITHIN A LIGHTING ZONE FOR 20 MINUTES. LIGHTING ZONES FOR THIS REQUIREMENT SHALL BE NO LARGER THAN 3600 FT2.

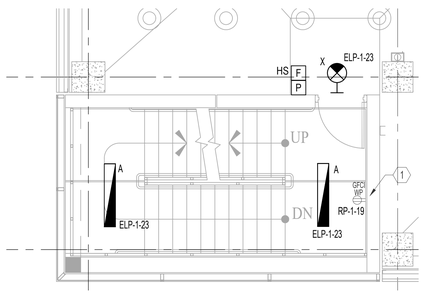
B. LIGHTING FOR COVERED VEHICLE ENTRANCES AND EXITS FROM BUILDINGS AND PARKING STRUCTURES SHALL BE SEPARATELY CONTROLLED BY A DEVICE THAT AUTOMATICALLY REDUCES THE LIGHTING BY AT LEAST 50% FROM SUNSET TO SUNRISE.

C. THE POWER TO LUMINAIRES WITHIN 20 FT OF ANY PERIMETER WALL STRUCTURE THAT HAS A NET OPENING-TO-WALL RATIO OF AT LEAST 40% AND NO EXTERIOR OBSTRUCTIONS WITHIN 20 FT, SHALL BE AUTOMATICALLY REDUCED IN RESPONSE TO DAYLIGHT BY AT LEAST 50%.



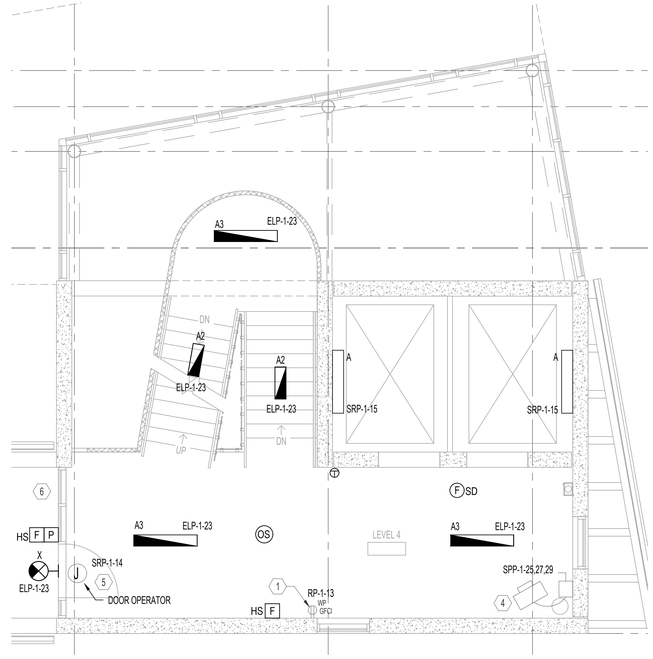
1 ELECTRICAL - LIGHITNG FLOOR PLAN - LEVEL 4

1/16"=1'-0"



3 STAIR TOWER 2 ELECTRICAL PLAN - LEVEL 4

1/4"=1'-0"



2 ELEVATOR LOBBY LEVEL 4

1/4"=1'-0"

ISSUE FOR BID	08-09-2024
Revisions:	Date:

CONSULTANT

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8/14/2024
STATE OF ILLINOIS

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL - LIGHITNG FLOOR PLAN - LEVEL 4	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: EL104
		Issue Date: 08-09-2024 / Checked: CC / Drawn: FK	

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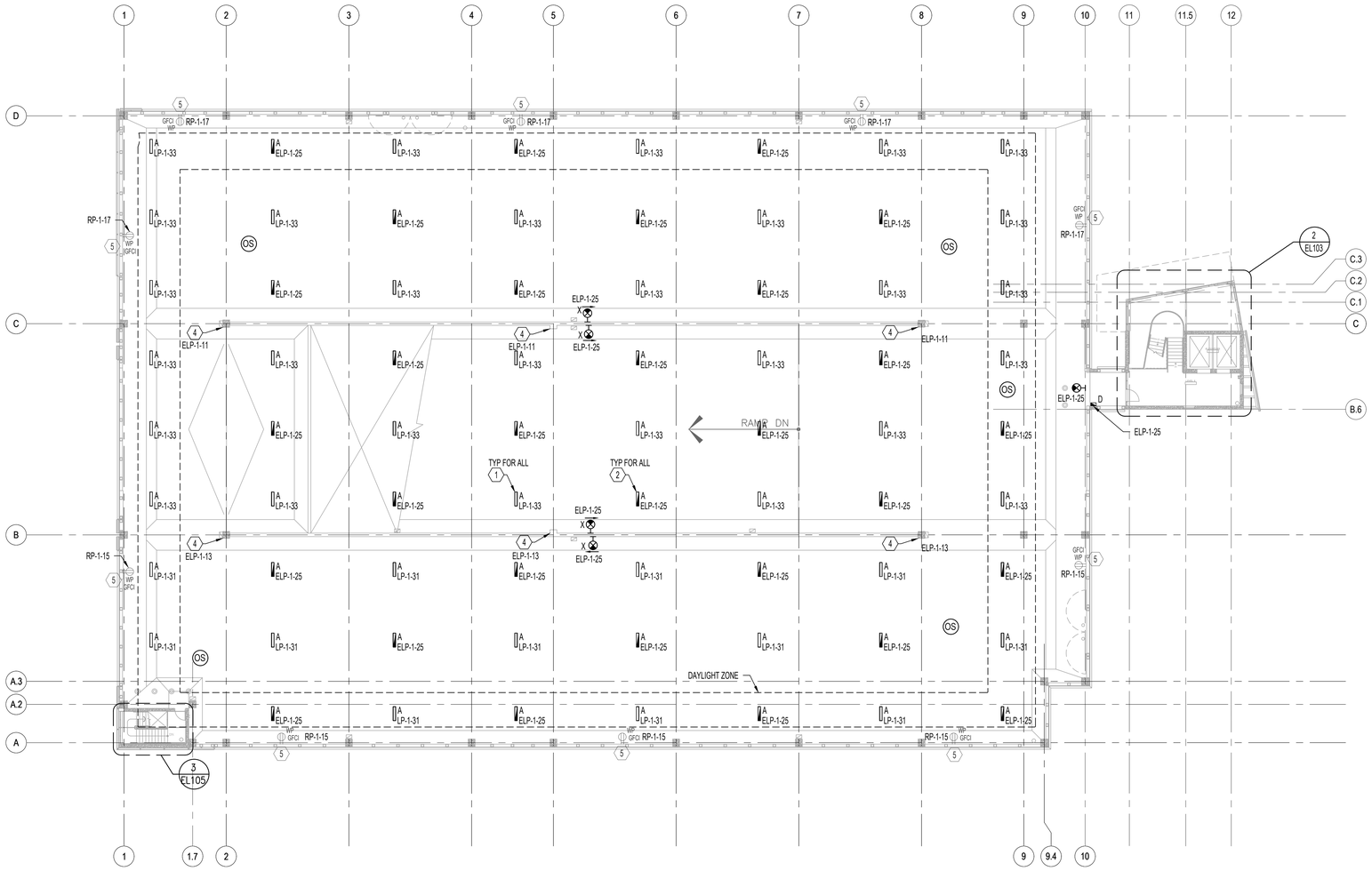


1 ELECTRICAL - LIGHITNG FLOOR PLAN - LEVEL 5
1/16"=1'-0"

ELECTRICAL GENERAL NOTES

A. REFER TO E001 AND E002 FOR SYMBOLS, ABBREVIATIONS AND ADDITIONAL NOTES.

B. UNLESS OTHERWISE NOTED, COORDINATE ALL MOUNTING HEIGHTS OF ALL DEVICES WITH ARCHITECTURAL INTERIOR ELEVATIONS.

C. EXISTING CONDITIONS BASED ON FIELD OBSERVATION. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND REPORT DISCREPANCIES TO ENGINEER PRIOR TO DISTURBING EXISTING INSTALLATION.

D. PROVIDE JUNCTION BOXES, WIRE, CABLING, CONDUIT, ETC. AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING DEVICES, EQUIPMENT, ETC. WHICH ARE TO REMAIN.

E. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AS REQUIRED TO KEEP THE PROJECT PROGRESSING.

F. REFER TO LIGHT FIXTURE SCHEDULES FOR ADDITIONAL INFORMATION.

G. CIRCUIT CONTINUITY SHALL BE MAINTAINED TO ALL AREAS NOT PART OF THE PROJECT DURING AND AFTER CONSTRUCTION. PROVIDE TEMPORARY POWER DURING CONSTRUCTION.

H. LEVELS 1 THRU 3 ARE EXISTING, LEVELS 4 AND 5 ARE NEW. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.

I. ALL LIGHT FIXTURES SHALL BE CONTROLLED BY TIME CLOCK LOCATED IN THE ELECTRICAL ROOM.

ELECTRICAL KEY NOTES

1. CONTRACTOR SHALL INSTALL NEW VAPOR TIGHT LIGHT FIXTURES UNDERNEATH SOLAR CANOPY. REFER TO LIGHTING SCHEDULE FOR ADDITIONAL INFORMATION. BID DEDUCT #3: REMOVE LIGHT FIXTURES AND SUBSTITUTE INSTALLATION OF SALVAGED LIGHT POLES. REFER TO KEYNOTE #4.
2. ALL EMERGENCY LIGHTING SHALL BE CIRCUITED TO EXISTING PANEL 'ELP-1-25'.
3. PROVIDE 480V/3PH CONNECTION TO 10KW EUH. DISCONNECT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND WIRED BY THE ELECTRICAL CONTRACTOR. LOCATE SWITCH ON ADJACENT WALL. COORDINATE WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN AND INSTALLATION. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION OF HEATER.
4. IF CANOPY IS NOT INSTALLED PER BID DEDUCT #3: CONTRACTOR SHALL RE-UTILIZE EXISTING LIGHT POLE FROM DEMOLITION AND DISREGARD CANOPY LIGHTING. CONTRACTOR SHALL UTILIZE EXISTING CIRCUIT ELP-1-25-11, AND CIRCUIT13 FROM DEMOLITION. EXTEND CONDUIT AND WIRING TO RELOCATED LIGHT POLE(S). WIRING TYPE TO MATCH EXISTING.
5. PROVIDE GFCI/WEATHER PROOF RECEPTACLE WITH WHILE IN USE LOCKABLE COVER.
6. CIRCUITING AND CONTROL EXTENDS TO DRAWING EL101; CONTROL ALL SHAFT LIGHTS TOGETHER.
7. PROVIDE 120V CIRCUIT FOR DOOR OPERATOR AND WIRE PER MANUFACTURER INSTRUCTIONS. COORDINATE DOOR CONTROL REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.
8. COORDINATE ALL ELEVATOR CONTROL PANEL CONNECTION REQUIREMENTS WITH BMS AND PACS CONTRACTORS. PROVIDE 20-AMP DEDICATED CIRCUIT ELP-1#20 AT CONTROL PANEL.
9. REFER TO FLOOR PLAN/VIEWPORT #1 FOR LOCATION OF LIGHT FIXTURE "D" IN THIS HALLWAY.

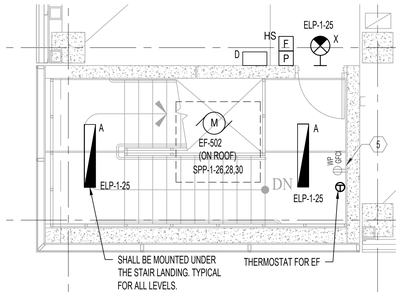
PARKING GARAGE LIGHTING CONTROLS

LIGHTING FOR PARKING GARAGES SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

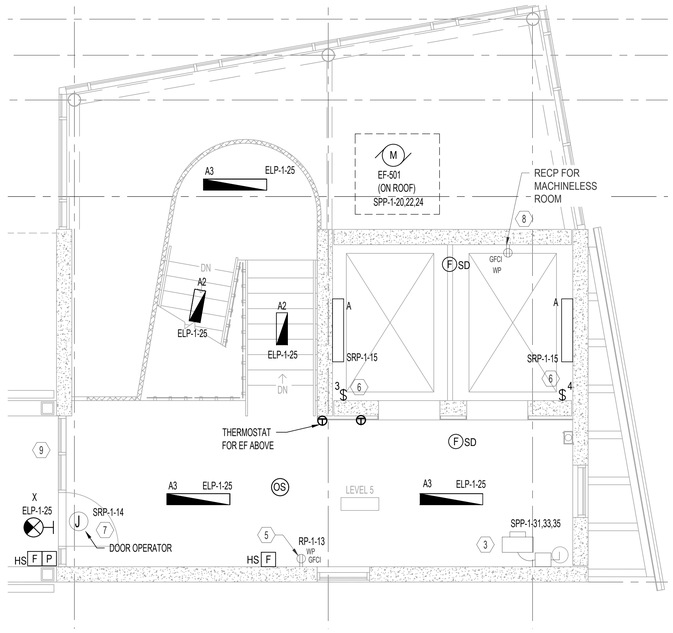
A. LIGHTING POWER OF EACH LUMINAIRE SHALL BE AUTOMATICALLY REDUCED BY A MINIMUM OF 30% WHEN THERE IS NO ACTIVITY DETECTED WITHIN A LIGHTING ZONE FOR 20 MINUTES. LIGHTING ZONES FOR THIS REQUIREMENT SHALL BE NO LARGER THAN 3600 FT2.

B. LIGHTING FOR COVERED VEHICLE ENTRANCES AND EXITS FROM BUILDINGS AND PARKING STRUCTURES SHALL BE SEPARATELY CONTROLLED BY A DEVICE THAT AUTOMATICALLY REDUCES THE LIGHTING BY AT LEAST 50% FROM SUNSET TO SUNRISE.

C. THE POWER TO LUMINAIRES WITHIN 20 FT OF ANY PERIMETER WALL STRUCTURE THAT HAS A NET OPENING-TO-WALL RATIO OF AT LEAST 40% AND NO EXTERIOR OBSTRUCTIONS WITHIN 20 FT, SHALL BE AUTOMATICALLY REDUCED IN RESPONSE TO DAYLIGHT BY AT LEAST 50%.



3 STAIR TOWER 2 ELECTRICAL PLAN - LEVEL 5
1/4"=1'-0"



2 ELEVATOR LOBBY LEVEL 5
1/4"=1'-0"

ISSUE FOR BID	08-09-2024
Revisions:	Date:

CONSULTANT

ARCHITECT/ENGINEER OF RECORD

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8/9/2024
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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL - LIGHITNG FLOOR PLAN - LEVEL 5
Phase: ISSUE FOR BID
Project Title: PARKING RAMP EXPANSION
Project Number: 528-18-375
Building Number: 29
Approved: Project Director
Location: 3495 BAILEY AVE., BUFFALO, NY 14215
Issue Date: 08-09-2024
Checked: CC
Drawn: FK
Drawing Number: EL105

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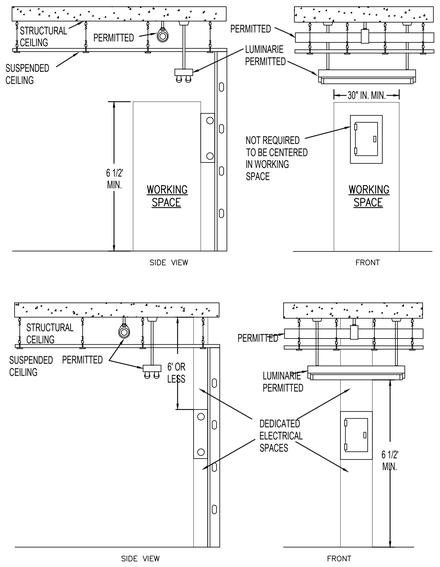
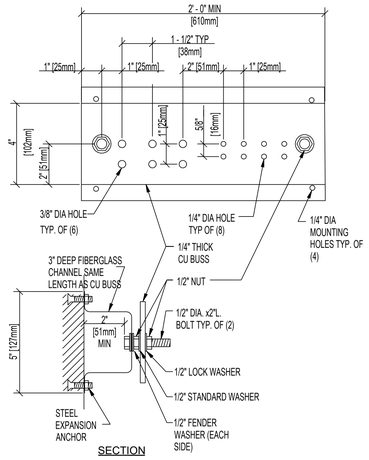


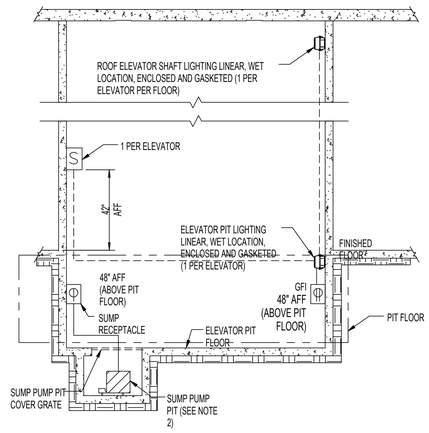
9 DEDICATED AND WORKING ELECTRICAL SPACES
NTS



SECTION

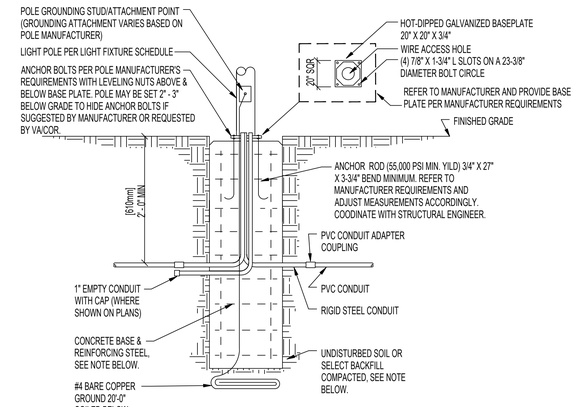
GENERAL NOTES:
1. ALL HARDWARE SHOWN SHALL BE STAINLESS STEEL.
2. PROVIDE 1 MOUNTING POINT PER 12" OF BAR LENGTH.
3. HOLES MAY BE ADDED IF REQUIRED.

7 ELECTRICAL ROOM GROUNDING BAR DETAIL
NTS



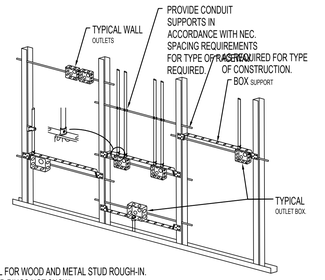
NOTES:
1. IN CASE OF A FIRE ALARM THE ELEVATORS PRIMARY RECALL SHALL BE THE GROUND LEVEL AND THE SECONDARY RECALL SHALL BE THE SECOND LEVEL.
2. SEE ARCHITECTURAL PLANS FOR EXACT FLOOR NAMES AND ADDITIONAL HOISTWAY AND PIT INFORMATION.

4 ELEVATOR PIT DETAIL
NTS



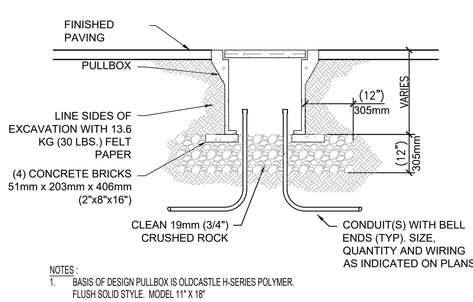
GENERAL NOTES:
1. BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. COORDINATE POLE BASE REQUIREMENTS WITH MANUFACTURER.
2. REFER TO SPECIFICATION SECTION 26 56 00 FOR MOUNTING AND LEVELING REQUIREMENTS.

1 POLE BASE DETAIL
NTS



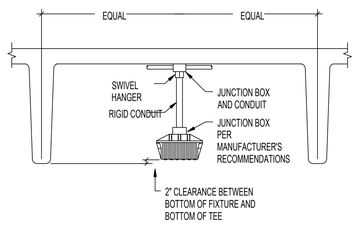
NOTES :
1. TYPICAL FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOW.
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. IN ACCORDANCE WITH UBC 4304 OUTLETS ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 24" HORIZONTAL DISTANCE.
5. TOENAILING OF OUTLET BOXES DIRECTLY TO THE STUDS WILL NOT BE ACCEPTED.
6. OUTLETS SHOWN TOGETHER ON PLAN SHALL BE INSTALLED TOGETHER.

10 TYPICAL ROUGH-IN
NTS

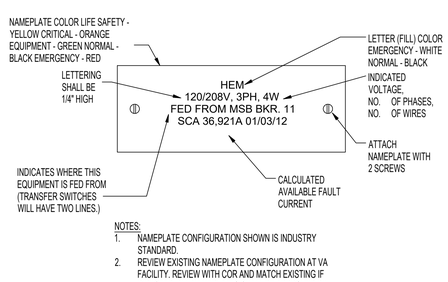


NOTES :
1. BASIS OF DESIGN PULLBOX IS OLDCASTLE H-SERIES POLYMER. FLUSH SOLID STYLE. MODEL 11" X 18"

12 UNDERGROUND CONCRETE PULLBOX - PAVED AREAS DETAIL
NTS

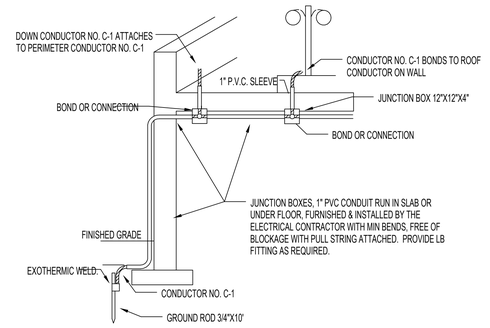


5 ELECTRICAL EQUIPMENT NAMEPLATE
NTS

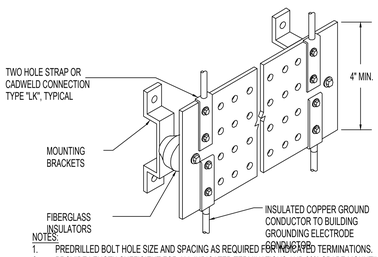


NOTES:
1. NAMEPLATE CONFIGURATION SHOWN IS INDUSTRY STANDARD.
2. REVIEW EXISTING NAMEPLATE CONFIGURATION AT VA FACILITY. REVIEW WITH COR AND MATCH EXISTING IF DIRECTED. ALL NAMEPLATES SHALL BE APPROVED BY EOR AND COR PRIOR TO INSTALLATION.

2 DOWN LEAD TO PARKING GARAGE GROUND LOOP
NTS

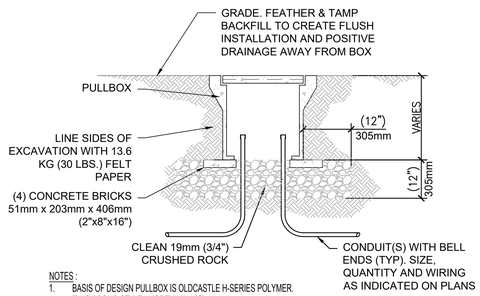


3 DOWN LEAD TO GROUND ROD CONNECTION
NTS



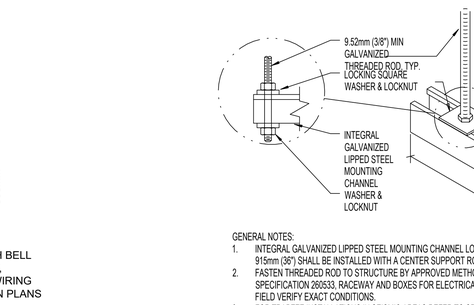
NOTES:
1. PREDRILLED BOLT HOLE SIZE AND SPACING AS REQUIRED FOR INDICATED TERMINATIONS.
2. PROVIDE LENGTH SUFFICIENT FOR ALL INDICATED TERMINATIONS AND 20% SPARE MOUNTING SPACE.
2.1. PROVIDE 24" GROUND BAR IF POSSIBLE, NO LESS THAN 12" MINIMUM.
3. GROUND BAR SHALL BE MOUNTED MINIMUM 2" OFF WALL AND 12" AFF.
4. FIBERGLASS INSULATORS SHALL HAVE A MINIMUM DIELECTRIC STRENGTH OF 15kV.

11 GROUND BAR DETAIL
NTS



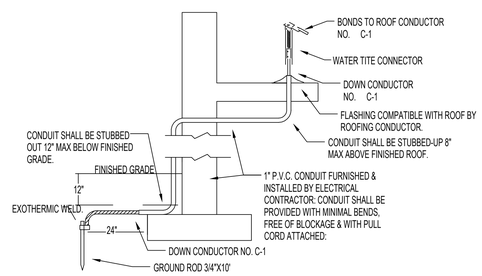
NOTES :
1. BASIS OF DESIGN PULLBOX IS OLDCASTLE H-SERIES POLYMER. FLUSH SOLID STYLE. MODEL 11" X 18"

13 UNDERGROUND CONCRETE PULLBOX - TURF AREA DETAIL
NTS



GENERAL NOTES:
1. INTEGRAL GALVANIZED LIPPED STEEL MOUNTING CHANNEL LONGER THAN 915mm (36") SHALL BE INSTALLED WITH A CENTER SUPPORT ROD.
2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD PER SPECIFICATION 260533, RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS. FIELD VERIFY EXACT CONDITIONS.
3. FOR TRAPEZE INSTALLATIONS IN SEISMIC AREAS REFER TO SPECIFICATION SECTION 130541, SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS.
4. PROVIDE 25% ADDITIONAL CAPACITY.

6 CONDUIT TRAPEZE MOUNTING DETAIL
NTS



8 LED FIXTURE MOUNTING DETAIL (TYPES A1, A2)
NTS

2 DOWN LEAD TO PARKING GARAGE GROUND LOOP
NTS

ISSUE FOR BID	**08-09-2024**
Revisions:	**Date:**

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Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title ELECTRICAL - DETAILS	**Phase** ISSUE FOR BID	**Project Title** PARKING RAMP EXPANSION	**Project Number** 528-18-375
			Building Number 29
Approved: Project Director		**Location** 3495 BAILEY AVE., BUFFALO, NY 14215	**Drawing Number** E501
		Issue Date 08-09-2024 / **Checked** CC / **Drawn** FK	

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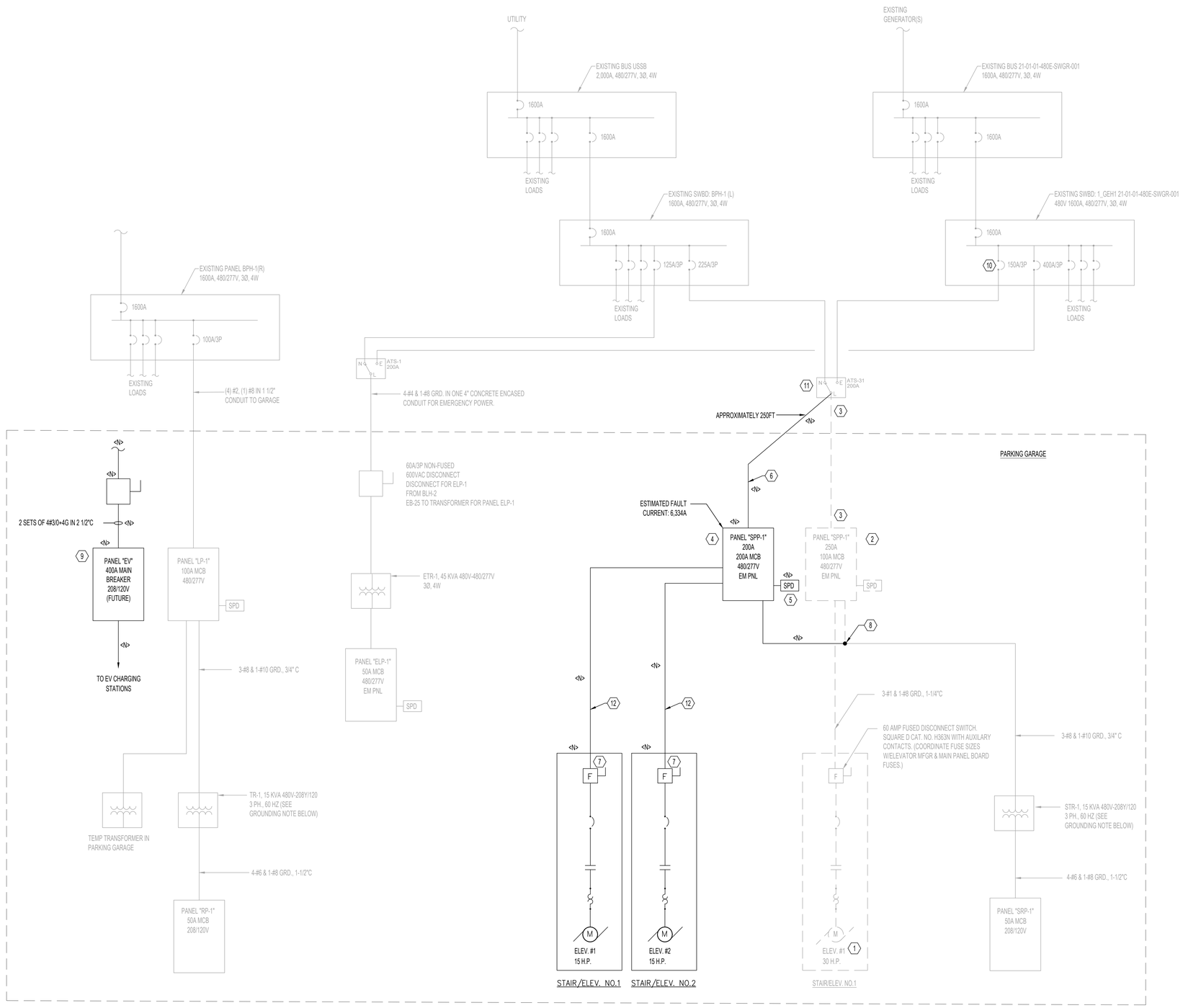

1 ELECTRICAL - PARTIAL ONE LINE DIAGRAM
NTS

ELECTRICAL GENERAL NOTES

A. REFER TO PANEL SCHEDULES ON E701 FOR MORE INFORMATION.

B. ALL ITEMS SHOWN ARE EXISTING UNLESS NOTED OTHERWISE. ALL NEW ITEMS ARE SHOWN WITH <N> SYMBOL. NEW ITEMS ARE ALSO SHOWN WITH BOLD/DARK LINES. EXISTING ITEMS ARE SHOWN WITH LIGHTER GRAY LINES. ITEMS TO BE REMOVED ARE SHOWN WITH LIGHTER GRAY DASHED LINES.

ELECTRICAL KEY NOTES

1. DISCONNECT AND REMOVE EXISTING ELEVATOR WITH ASSOCIATED EQUIPMENT, CONDUIT AND WIRING BACK TO SOURCE.
2. DISCONNECT AND REMOVE EXISTING PANEL SPP1. DISCONNECT AND REMOVE WIRING BACK TO SOURCE.
3. DISCONNECT AND REMOVE WIRING FROM ATS-31 TO PANEL SPP1. CONTRACTOR SHALL ABANDON EXISTING EXTERIOR TRENCH AND SAW CUT CONDUIT TO GRADE.
4. PROVIDE NEW 200A, 480/277V, 3Ø, 4W PANELBOARD.
5. PROVIDE PQ PROTECTION SPD, MODEL PQC100-480/277V, OR APPROVED EQUAL.
6. RUN NEW TRENCH WITH 4#4/0+#4G IN 2"C WITH 3" EMPTY CONDUIT WITH PULL STRING FROM ATS-31 (BUILDING 1) TO NEW PANEL 'SPP1'. INSTALL 16" X 16" JUNCTION BOX AT BOTH ENDS OF RUN.
7. PROVIDE 60A, 480V/3Ø RK1 FUSED DISCONNECT SWITCH. COORDINATE WITH ELEVATOR MANUFACTURER PRIOR TO ROUGH-IN AND INSTALLATION.
8. CONTRACTOR SHALL DISCONNECT EXISTING TRANSFORMER 'STR-1' FEEDER FROM DEMOLISHED PANEL. CONTRACTOR SHALL RE-CONNECT TRANSFORMER FEEDER 'STR-1' TO NEW PANELBOARD 'SPP1'. EXTEND CONDUIT AND WIRING AS REQUIRED. WIRING TYPE TO MATCH EXISTING.
9. PROVIDE ADDITIONAL SPACE AND/OR CLEARANCE FOR FUTURE PANELBOARD AND DISCONNECT SWITCH FOR EV CHARGING STATIONS. ALL WORK SHOWN IS FOR REFERENCE ONLY. ENSURE PHYSICAL SPACE FOR FUTURE ITEMS SHOWN IS ADEQUATE.
10. CONTRACTOR SHALL REPLACE EXISTING 150A/3P CIRCUIT BREAKER TO A LSI 225A/3P CIRCUIT BREAKER. CIRCUIT BREAKER TYPE TO MATCH EXISTING. SHUT DOWN OF POWER MUST BE COORDINATED WITH THE VA/COR A MINIMUM OF 30 DAYS IN ADVANCE.
11. CONTRACTOR SHALL PROGRAM EXISTING 200 ATS TO HAVE A 5 SEC DELAY FOR SECOND ELEVATOR. WORK TO BE COORDINATED WITH THE VA ELECTRICAL SUPERVISOR AND THE COR.
12. RUN 3#10+10G IN 3/4"C.

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Revisions:	Date:

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VA U.S. Department of Veterans Affairs

Drawing Title: ELECTRICAL - PARTIAL ONE LINE DIAGRAM	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: E601
		Issue Date: 08-09-2024 / Checked: CC / Drawn: FK	

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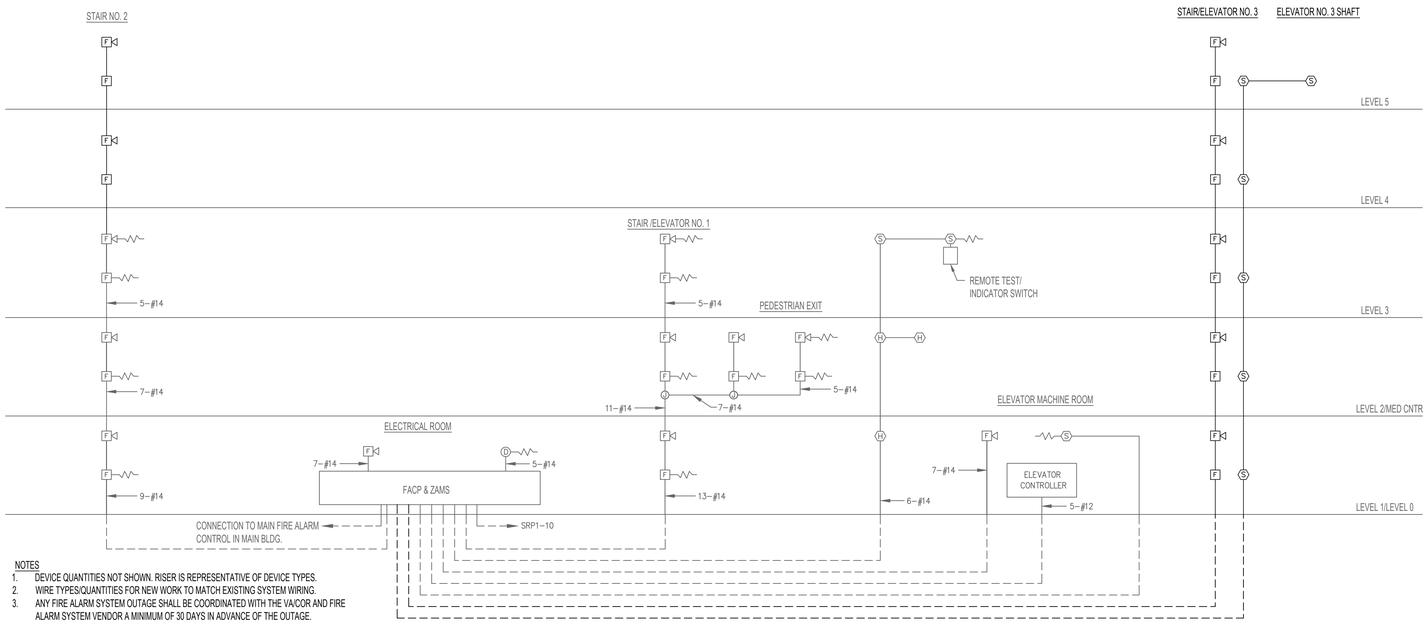
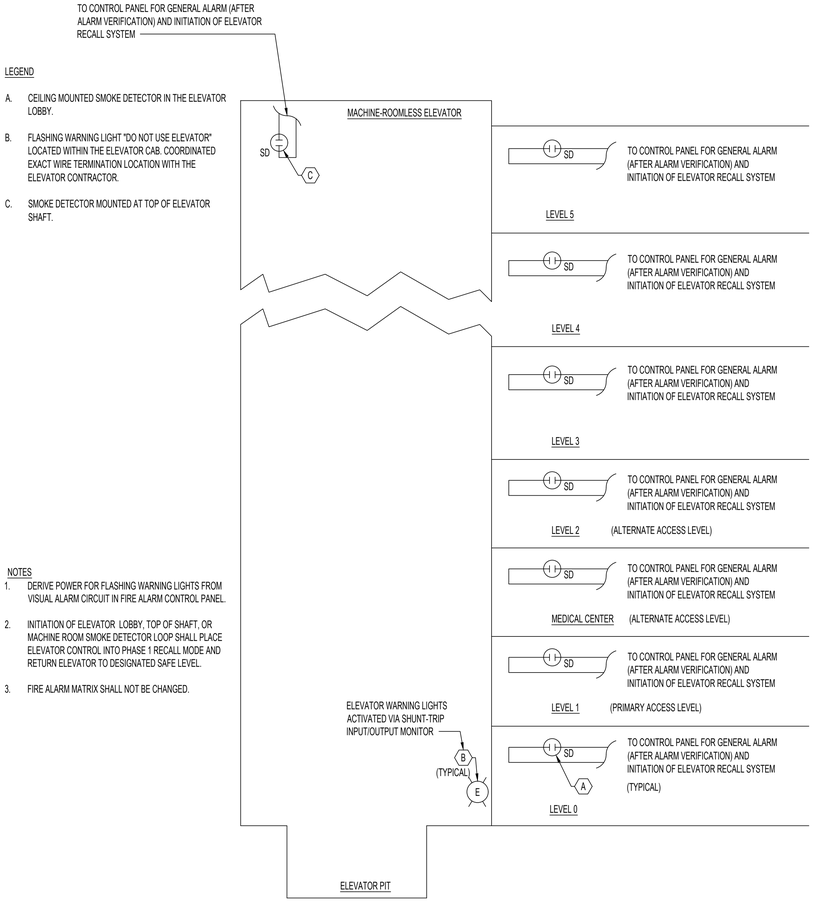


NOTES
1. DEVICE QUANTITIES NOT SHOWN. RISER IS REPRESENTATIVE OF DEVICE TYPES.
2. WIRE TYPES/QUANTITIES FOR NEW WORK TO MATCH EXISTING SYSTEM WIRING.
3. ANY FIRE ALARM SYSTEM OUTAGE SHALL BE COORDINATED WITH THE VA/COR AND FIRE ALARM SYSTEM VENDOR A MINIMUM OF 30 DAYS IN ADVANCE OF THE OUTAGE.

1 FIRE ALARM - ONE LINE DIAGRAM
NTS



LEGEND

A. CEILING MOUNTED SMOKE DETECTOR IN THE ELEVATOR LOBBY.

B. FLASHING WARNING LIGHT "DO NOT USE ELEVATOR" LOCATED WITHIN THE ELEVATOR CAB. COORDINATED EXACT WIRE TERMINATION LOCATION WITH THE ELEVATOR CONTRACTOR.

C. SMOKE DETECTOR MOUNTED AT TOP OF ELEVATOR SHAFT.

NOTES
1. DERIVE POWER FOR FLASHING WARNING LIGHTS FROM VISUAL ALARM CIRCUIT IN FIRE ALARM CONTROL PANEL.
2. INITIATION OF ELEVATOR LOBBY, TOP OF SHAFT, OR MACHINE ROOM SMOKE DETECTOR LOOP SHALL PLACE ELEVATOR CONTROL INTO PHASE 1 RECALL MODE AND RETURN ELEVATOR TO DESIGNATED SAFE LEVEL.
3. FIRE ALARM MATRIX SHALL NOT BE CHANGED.

2 ELEVATOR FIRE ALARM SYSTEM
NTS

ISSUE FOR BID	08-09-2024
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VA U.S. Department of Veterans Affairs

Drawing Title: FIRE ALARM - ONE LINE DIAGRAM	Phase: ISSUE FOR BID	Project Title: PARKING RAMP EXPANSION	Project Number: 528-18-375
			Building Number: 29
Approved: Project Director		Location: 3495 BAILEY AVE., BUFFALO, NY 14215	Drawing Number: E602
		Issue Date: 08-09-2024 / Checked: CC / Drawn: FK	

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VA FORM 08 - 6231

PANELBOARD LP-1 SCHEDULE

VOLTAGE (L-L/L-N): 480 / 277 V	PHASE: 3	WIRES: 4	MAIN TYPE: MCB
MAIN OC DEVICE: 100 A	BUS RATING: 125 A	MIN AIC RATING: 10,000 A	ENCLOSURE TYPE: NEMA 1
MOUNTING: SURFACE	FEED-THRU LUGS: NO	SUB-FEED LUGS: NO	ISOLATED GND BUS: NO
NEUTRAL BUS: YES			

CKT NO	DESCRIPTION	BREAKER POLE	BREAKER TRIP	PHASE LOADS (VA) A		B		C		BREAKER TRIP	BREAKER POLE	DESCRIPTION	CKT NO
1	EXISTING CIRCUIT	1	20	1,800	476					20	1	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	1	20			1,086	1,681			20	1	EXISTING CIRCUIT	4
5	EXISTING CIRCUIT	1	20					2,172	476	20	1	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	1	20	476	1,190					20	1	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	1	20			595	476			20	1	EXISTING CIRCUIT	10
11	EXISTING CIRCUIT	1	20					500	500	20	1	EXISTING CIRCUIT	12
13	EXISTING CIRCUIT	1	20	714	3,324					20	1	EXISTING CIRCUIT	14
15	EXISTING CIRCUIT	1	20			744	3,324			20	1	EXISTING CIRCUIT	16
17	EXISTING CIRCUIT	1	20					952	3,324	20	1	EXISTING CIRCUIT	18
19	EXISTING CIRCUIT	1	20	160	3,324					20	1	EXISTING CIRCUIT	20
21	EXISTING CIRCUIT	1	20			120	420			20	1	EXISTING CIRCUIT	22
23	**LIGHTING - LEVEL 3**	1	20					1,330	500	20	1	EXISTING CIRCUIT	24
25	**LIGHTING - LEVEL 3**	1	20	1,330	4,300					25	3	EXISTING 15KVA XFMER	26
27	**LIGHTING - LEVEL 4**	1	20			1,330	3,460					"	28
29	**LIGHTING - LEVEL 4**	1	20					1,330	4,320			"	30
31	**LIGHTING - LEVEL 5**	1	20	1,368	288					20	1	**EXTERIOR LIGHTS**	32
33	**LIGHTING - LEVEL 5**	1	20			1,140	100			20	1	**EXTERIOR LIGHT POLE**	34
35	**EXTERIOR LIGHT POLES**	1	20					500	436	20	1	**LEVEL 2**	36
37	SPD	3	50	0	5,000					50	3	TEMP XFMR IN P.GARAGE	38
39	"					0	5,000					"	40
41	"							0	5,000			"	42
			TOTAL	23,750		19,476		21,340					

LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
EXTERIOR LIGHTING	888	1.25	1,110
INTERIOR LIGHTING	35,382	1.25	44,228
RECEPTACLE (1st 10 k)	0	1.00	0
RECEPTACLE (Over 10 k)	0	0.50	0
AIR HANDLERS	0	1.00	0
ELECTRIC HEAT	13,296	1.00	13,296
COOLING	0	1.00	0
EQUIPMENT/MOTORS	0	1.00	0
LARGEST MOTOR	0	1.25	0
MISCELLANEOUS	15,000	1.00	15,000
TOTAL	64,566		73,634

PANEL SUMMARY	
CONNECTED	78 A
DEMAND	89 A
SPARE CAPACITY	11 %

NOTES:
1. FED FROM BPH-1 (EP-25) SEC-1 - 100A
2. REPLACE EXISTING LIGHT FIXTURES LEVEL 1 AND 2 TO LED FIXTURES. COORDINAT WITH VA/COR.

ADDITIONAL PANEL SCHEDULE NOTES:
1. PANEL IS EXISTING / REVISED OR NEW CIRCUITS ARE SHOWN WITH BOLD TEXT.

PANELBOARD ELP-1 SCHEDULE

VOLTAGE (L-L/L-N): 480 / 277 V	PHASE: 3	WIRES: 4	MAIN TYPE: MCB
MAIN OC DEVICE: 50 A	BUS RATING: 125 A	MIN AIC RATING: 10,000 A	ENCLOSURE TYPE: NEMA 1
MOUNTING: SURFACE	FEED-THRU LUGS: NO	SUB-FEED LUGS: NO	ISOLATED GND BUS: NO
NEUTRAL BUS: YES			

CKT NO	DESCRIPTION	BREAKER POLE	BREAKER TRIP	PHASE LOADS (VA) A		B		C		BREAKER TRIP	BREAKER POLE	DESCRIPTION	CKT NO
1	EXISTING CIRCUIT	1	20	1,666	560					20	1	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	1	20			1,547	70			20	1	EXISTING CIRCUIT	4
5	EXISTING CIRCUIT	1	20					952	500	20	1	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	1	20	1,904	699					20	1	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	1	20			1,785	280			20	1	EXISTING CIRCUIT	10
11	EXISTING CIRCUIT	1	20					1,953	500	20	1	EXISTING CIRCUIT	12
13	EXISTING CIRCUIT	1	20	1,953	500					20	1	EXISTING CIRCUIT	14
15	EXISTING CIRCUIT	1	20			930	500			20	1	EXISTING CIRCUIT	16
17	EXISTING CIRCUIT	1	20					599	304	20	1	**EM LTG LVL 1&2 NEW STAIR TWR**	18
19	EXISTING CIRCUIT	1	20	280	0					20	1	**ELEVATOR CONTROL CABINET**	20
21	**EM LIGHTING LEVEL 3**	1	20			986	0			20	1	SPARE	22
23	**EM LIGHTING LEVEL 4**	1	20					1,102	0	20	1	SPARE	24
25	**EM LIGHTING LEVEL 5**	1	20	1,406	0					20	1	SPARE	26
27	SPARE	1	20			0	-					SPACE	28
29	SPARE	1	20					0	-			SPACE	30
31	SPARE	1	20	0	-							SPACE	32
33	SPARE	1	20			0	-					SPACE	34
35	SPACE							-	-			SPACE	36
37	SPACE			-	0					50	3	SPD	38
39	SPACE					-	0					"	40
41	SPACE							-	0			"	42
			TOTAL	8,968		6,098		5,910					

LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
EXTERIOR LIGHTING	0	1.25	0
INTERIOR LIGHTING	20,976	1.25	26,220
RECEPTACLE (1st 10 k)	0	1.00	0
RECEPTACLE (Over 10 k)	0	0.50	0
AIR HANDLERS	0	1.00	0
ELECTRIC HEAT	0	1.00	0
COOLING	0	1.00	0
EQUIPMENT/MOTORS	0	1.00	0
LARGEST MOTOR	0	1.25	0
MISCELLANEOUS	0	1.00	0
TOTAL	20,976		26,220

PANEL SUMMARY	
CONNECTED	25 A
DEMAND	32 A
SPARE CAPACITY	21 %

NOTES:
1. FED FROM ATS-1.

ADDITIONAL PANEL SCHEDULE NOTES:
1. PANEL IS EXISTING / REVISED OR NEW CIRCUITS ARE SHOWN WITH BOLD TEXT.

PANELBOARD RP-1 SCHEDULE

VOLTAGE (L-L/L-N): 208 / 120 V	PHASE: 3	WIRES: 4	MAIN TYPE: MCB
MAIN OC DEVICE: 50 A	BUS RATING: 225 A	MIN AIC RATING: 10,000 A	ENCLOSURE TYPE: NEMA 1
MOUNTING: SURFACE	FEED-THRU LUGS: NO	SUB-FEED LUGS: NO	ISOLATED GND BUS: NO
NEUTRAL BUS: YES			

CKT NO	DESCRIPTION	BREAKER POLE	BREAKER TRIP	PHASE LOADS (VA) A		B		C		BREAKER TRIP	BREAKER POLE	DESCRIPTION	CKT NO
1	EXISTING CIRCUIT	1	20	540	540					20	1	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	1	20			720	540			20	1	EXISTING CIRCUIT	4
5	EXISTING CIRCUIT	1	20					480	720	20	1	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	1	20	480	500					20	1	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	1	20			180	500			20	1	EXISTING CIRCUIT	10
11	EXISTING CIRCUIT	1	20					800	800	20	1	EXISTING CIRCUIT	12
13	**RECEPTACLE LVL 0/MED LBY**	1	20	1,440	800					20	1	EXISTING CIRCUIT	14
15	**RECEPTACLE LEVEL 5**	1	20			900	800			20	2	EXISTING CIRCUIT	16
17	**RECEPTACLE LEVEL 5**	1	20					900	800			"	18
19	**STAIR TOWER RECEPTACLE**	1	20	540	0					20	1	SPARE	20
21	SPARE	1	20			0	0			20	1	SPARE	22
23	SPARE	1	20					0	0	20	1	SPARE	24
25	SPARE	1	20	0	0					20	1	SPARE	26
27	SPARE	1	20			0	0			20	1	SPARE	28
29	SPARE	1	20					0	0	20	1	SPARE	30
31	SPACE			-	-							SPACE	32
33	SPACE					-	-					SPACE	34
35	SPACE							-	-			SPACE	36
37	SPACE			-	0					50	3	MAIN BREAKER	38
39	SPACE					-	0					"	40
41	SPACE							-	0			"	42
			TOTAL	4,840		3,640		4,500					

LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
EXTERIOR LIGHTING	0	1.25	0
INTERIOR LIGHTING	0	1.25	0
RECEPTACLE (1st 10 k)	8,980	1.00	8,980
RECEPTACLE (Over 10 k)	0	0.50	0
AIR HANDLERS	0	1.00	0
ELECTRIC HEAT	0	1.00	0
COOLING	0	1.00	0
EQUIPMENT/MOTORS	0	1.00	0
LARGEST MOTOR	0	1.25	0
MISCELLANEOUS	4,000	1.00	4,000
TOTAL	12,980		12,980

PANEL SUMMARY	
CONNECTED	36 A
DEMAND	36 A
SPARE CAPACITY	10 %

NOTES:
1. FED FROM PNL LP-1 VIA 15KVA XFMER

ADDITIONAL PANEL SCHEDULE NOTES:
1. PANEL IS EXISTING / REVISED OR NEW CIRCUITS ARE SHOWN WITH BOLD TEXT.

PANELBOARD SRP-1 SCHEDULE

VOLTAGE (L-L/L-N): 208 / 120 V	PHASE: 3	WIRES: 4	MAIN TYPE: MCB
MAIN OC DEVICE: 50 A	BUS RATING: 225 A	MIN AIC RATING: 10,000 A	ENCLOSURE TYPE: NEMA 1
MOUNTING: SURFACE	FEED-THRU LUGS: NO	SUB-FEED LUGS: NO	ISOLATED GND BUS: NO
NEUTRAL BUS: YES			

CKT NO	DESCRIPTION	BREAKER POLE	BREAKER TRIP	PHASE LOADS (VA) A		B		C		BREAKER TRIP	BREAKER POLE	DESCRIPTION	CKT NO
1	EXISTING CIRCUIT	1	20	294	500					20	1	EXISTING CIRCUIT	2
3	EXISTING CIRCUIT	1	20			294	0				1	SPARE	4
5	EXISTING CIRCUIT	1	20					665	720	20	1	EXISTING CIRCUIT	6
7	EXISTING CIRCUIT	1	20	380	500					20	1	EXISTING CIRCUIT	8
9	EXISTING CIRCUIT	1	20			480	500			20	1	**ELEVATOR RECALL PANEL**	10
11	SPARE	2	15					0	180	20	1	EXISTING CIRCUIT	12
13	"			0	1,800					20	1	**DOOR OPERATORS**	14
15	**ELEVATOR 1 PIT RECT/LTG**	1	20			760	1,440			20	1	**DOOR OPERATORS**	16
17	**ELEVATOR SUMP PUMP**	1	20					500	0	20	1	SPARE	18
19	**ELEVATOR 1 CAB POWER**	1	20	500	0					20	1	SPARE	20
21	**ELEVATOR 2 CAB POWER**	1	20			500	0			20	1	SPARE	22
23	SPARE	1	20					0	0	20	1	SPARE	24
25	SPARE	1	20	0	0					20	1	SPARE	26
27	SPARE	1	20			0	0			20	1	SPARE	28
29	SPARE	1	20					0	0	20	1	SPARE	30
31	SPACE			-	-							SPACE	32
33	SPACE					-	-					SPACE	34
35	SPACE							-	-			SPACE	36
37	SPACE			-	0					50	3	EXISTING CIRCUIT (MCB)	38
39	SPACE					-	0					"	40
41	SPACE							-	0			"	42
			TOTAL	3,974		3,974		2,065					

LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
EXTERIOR LIGHTING	0	1.25	0
INTERIOR LIGHTING	2,513	1.25	3,141
RECEPTACLE (1st 10 k)	3,260	1.00	3,260
RECEPTACLE (Over 10 k)	0	0.50	0
AIR HANDLERS	0	1.00	0
ELECTRIC HEAT	0	1.00	0
COOLING	0	1.00	0
EQUIPMENT/MOTORS	4,240	1.00	4,240
LARGEST MOTOR	0	1.25	0
MISCELLANEOUS	0	1.00	0
TOTAL	10,013		10,641

PANEL SUMMARY	
CONNECTED	28 A
DEMAND	30 A
SPARE CAPACITY	26 %

NOTES:
1. FED FROM PNL SP-1 VIA 15KVA XFMER

ADDITIONAL PANEL SCHEDULE NOTES:
1. PANEL IS EXISTING / REVISED OR NEW CIRCUITS ARE SHOWN WITH BOLD TEXT.

PANELBOARD SPP-1 SCHEDULE

VOLTAGE (L-L/L-N): 480 / 277 V	PHASE: 3	WIRES: 4	MAIN TYPE: MCB
MAIN OC DEVICE: 200 A	BUS RATING: 250 A	MIN AIC RATING: 18,000 A	ENCLOSURE TYPE: NEMA 1
MOUNTING: SURFACE	FEED-THRU LUGS: NO	SUB-FEED LUGS: NO	ISOLATED GND BUS: NO
NEUTRAL BUS: YES			

CKT NO	DESCRIPTION	BREAKER POLE	BREAKER TRIP	PHASE LOADS (VA) A		B		C		BREAKER TRIP	BREAKER POLE	DESCRIPTION	CKT NO
1	EXISTING CIRCUIT (XFMER)	3	25	4,223	3,333					20	3	EUH LEVEL 0	2
3	"					4,223	3,333					"	4
5	"							2,195	3,333			"	6
7	ELEVATOR MOTOR 1 (15HP)	3	50	5,577	3,333					20	3	EUH LEVEL 1	8
9	"					5,577	3,333					"	10
11	"							5,577	3,333			"	12
13	ELEVATOR MOTOR 2 (15HP)	3	50	5,577	3,333					20	3	CUH-1	14
15	"					5,577	3,333					"	16
17	"							5,577	3,333			"	18
19	EUH LEVEL 3	3	20	3,333	2,018					15	3	EF-501 (5HP)	20
21	"					3,333	2,018					"	22
23	"							3,333	2,018			"	24
25	EUH LEVEL 4	3	20	3,333	558					15	3	EF-502 (1HP)	26
27	"					3,333	558					"	28
29	"							3,333	558			"	30
31	EUH LEVEL 5	3	20	3,333	3,333					20	3	EUH MED CNTR LBY	32
33	"					3,333	3,333					"	34
35	"							3,333	3,333			"	36
37	SPD	3	30	0	3,333					20	3	EUH LEVEL 2	38
39	"					0	3,333					"	40
41	"							0	3,333			"	42
			TOTAL	44,619		44,619		42,590					

LOAD CLASSIFICATION	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
EXTERIOR LIGHTING	0	1.25	0
INTERIOR LIGHTING	2,513	1.25	3,141
RECEPTACLE (1st 10 k)	3,260	1.00	3,260
RECEPTACLE (Over 10 k)	0	0.50	0
AIR HANDLERS	0	1.00	0
ELECTRIC HEAT	49,996	1.00	49,996
COOLING	0	1.00	0
EQUIPMENT/MOTORS	75,430	1.00	75,430
LARGEST MOTOR	0	1.25	0
MISCELLANEOUS	0	1.00	0
TOTAL	131,199		131,827

PANEL SUMMARY	
CONNECTED	158 A
DEMAND	159 A
SPARE CAPACITY	1 %

NOTES:
1. FED FROM ATS-31 (EB-25)

ADDITIONAL PANEL SCHEDULE NOTES:
1. PANEL IS NEW. REFER TO E601 FOR MORE DETAILS.

LIGHTING FIXTURE SCHEDULE

FIXTURE	DESCRIPTION	CATALOG REFERENCE	WATTS	SUPPLY VOLTAGE	LAMPS	MOUNTING	REMARKS
A	LED, 1'X4' LOW PROFILE ENCLOSED AND GASKETED 6,000 LUMENS	LITHIONIA #FEM-L48-6000LM-IMAFL-PGD-MVOLT-GZ10-50K-80CRI-BAA OR APPROVED EQUAL	38	MVOLT	LED	PENDANT AND WALL MOUNT	GENERAL: PROVIDE MANUFACTURER CONTROL OPTIONS AS NEEDED TO MEET LIGHTING CONTROL INTENT AS PER FLOOR PLANS. STAIRWAYS: PROVIDE PIR, OCCUPANCY CONTROLLED DIMMING (BI-LEVEL) - SB0R10 HL 3V
A1	LED, 4' MULTIPURPOSE LINEAR	COLUMBIA #MPS4-35HL-CPW-EDU-PAF OR APPROVED EQUAL	49.5	MVOLT	LED	SURFACE	PAINT TO MATCH MODULAR AWNING SYSTEM (CANOPY), MOUNT TO CANTILEVERED SUPPORT TUBES
A2	LED, 2' MULTIPURPOSE LINEAR	COLUMBIA #MPS2-35HL-CPW-EDU-PAF-NXS OR APPROVED EQUAL	31.7	MVOLT	LED	SURFACE	FOR STAIRWAYS: PROVIDE PIR, OCCUPANCY CONTROLLED DIMMING
A3	LED, 4' MULTIPURPOSE LINEAR	COLUMBIA #MPS4-35HL-CPW-EDU-PAF-NXS OR APPROVED EQUAL	49.5	MVOLT	LED	SURFACE	FOR STAIRWAYS: PROVIDE PIR, OCCUPANCY CONTROLLED DIMMING
B	K211 MANCHESTER - LED WALKWAY LIGHTING 9,916 LUMENS, WITH KA72 - ATLANTIC ARM	KING LUMINAIRE K211-P4GS-IV-75W-SSL-7030-277V-KPL21-PEBC-4K-GY ARM MODEL# KA72-A-T2-1-6 POLE MODEL# KBH-20-S-40-FBP-TENON*	75	MVOLT	LED	ARM	UTILIZE BELMONT - DECORATIVE CONCRETE POLE, STRESSCRETE. TENON MOUNT OPTION 2 - TO ACCEPT A 2-1/2" IPS (2-7/8" OD) X 7"L ON A 6" DIAMETER POLE TOP.
C	RSX1 LED AREA LUMINAIRE 9,843 LUMENS	LITHIONIA #RSX1-LED-P2-50K-R3-MVOLT-WBA-PE-BAA-DDBXD OR APPROVED EQUAL	72	MVOLT	LED	WALL MOUNT	EXTERIOR OF PARKING GARAGE ENTRANCE / EXIT
D	TWS LED MINI WALL PACK 1,700 LUMENS	LITHIONIA #TWS-LED-ALO-SWW2-MVOLT-PE-DDB	12	MVOLT	LED	WALL MOUNT	PROVIDE ALL ACCESSORIES AS REQUIRED
E	96" RING UP/DOWNLIGHT 14,130 LUMENS	LUMOS #RP-UP-DN-96-HO-835-DIM-MCC-POC-WHT-WCC	135	MVOLT	LED	SUSPENDED	CUSTOM MCC-POC: PROVIDE MOUNTING CABLES TO ACHIEVE A SUSPENSION HEIGHT OF 37'-8" INCHES
F	84" RING UP/DOWNLIGHT 12,364 LUMENS	LUMOS #RP-UP-DN-84-HO-835-DIM-MCC-POC-WHT-WCC	125	MVOLT	LED	SUSPENDED	CUSTOM MCC-POC: PROVIDE MOUNTING CABLES TO ACHIEVE A SUSPENSION HEIGHT OF 31'-8" INCHES
G	60" RING UP/DOWNLIGHT 8,831 LUMENS	LUMOS #RP-UP-DN-60-HO-835-DIM-MCC-POC-WHT-WCC	100	MVOLT	LED	SUSPENDED	CUSTOM MCC-POC: PROVIDE MOUNTING CABLES TO ACHIEVE A SUSPENSION HEIGHT OF 25'-8" INCHES
X	EMERGENCY LED EXIT SIGN, RED LETTERS, WHITE	LITHIONIA #LQM-S-W-3-R-277-M6-BAA OR APPROVED EQUAL	1	MVOLT	LED	WALL MOUNT	PROVIDE ALL ACCESSORIES AS REQUIRED

GENERAL LIGHTING FIXTURE NOTES (APPLICABLE TO ALL FIXTURE TYPES):
1. PROVIDE ALL NECESSARY MOUNTING HARDWARE, ACCESSORIES AS REQUIRED TO ACCOMMODATE THE ACTUAL CEILING TYPE.
2. VERIFY COMPATIBILITY OF ALL DIMMING FIXTURES AND ASSOCIATED CONTROL/SWITCH WITH MANUFACTURER PRIOR TO ORDERING.
3. WHERE DIMMING OF LIGHTS IS INDICATED ON PLANS, PROVIDE DIMMING DRIVERS AND 0–10V CONTROL CIRCUITRY AS REQUIRED.
4. LABEL SHALL BE PROVIDED ON EACH LIGHT FIXTURE WITH MANUFACTURERS NAME, CATALOG NUMBER, AND UL, UNION LABELS, ETC.
5. ALL LIGHTING FIXTURES SHALL BE UL LISTED FOR THE APPLICATION.
6. REFER TO ELECTRICAL DETAILS SHEET(S) FOR ADDITIONAL INFORMATION.
7. MOUNTING HEIGHT(S) OF FIXTURES ARE TO THE BOTTOM OF THE FIXTURE AND SHALL BE COORDINATED WITH ACTUAL FIELD CONDITIONS.
8. VERIFY COLORS AND FINISHES WITH ARCHITECT PRIOR TO ORDERING.

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CONSULTANT

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Office of Construction and Facilities Management
VA U.S. Department of Veterans Affairs

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Approved: Project Director
Phase: ISSUE FOR BID
Project Title: PARKING RAMP EXPANSION
Location: 3495 BAILEY AVE., BUFFALO, NY 14215
Issue Date: 08-09-2024
Checked: CC
Drawn: FK
Project Number: 528-18-375
Building Number: 29
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