B. EXIT SIGNS AND EMERGENCY LIGHTS SHALL HAVE THEIR OWN SELF-CONTAINED STANDBY BATTERY POWER SUPPLY. LOCAL CODE REQUIRES A DIRECT TAP BEFORE ANY CIRCUIT BREAKERS THEN INCORPORATE INTO

C. PROVIDE EMERGENCY LIGHTING TO MEET THE REQUIRED FOOT CANDLE LEVEL PER LOCAL CODE.

D. LUMINAIRES INSTALLED IN CONTINUOUS ROWS SHALL BE GROUNDED WITH A CONDUCTOR ROUTED FROM LUMINAIRE TO LUMINAIRE, MOUNTED TO EACH WITH GROUNDING LUG OR SCREW. ALIGNING CLIPS ARE NOT ACCEPTABLE. LUMINAIRE GROUNDING SHALL BE INSTALLED IN COMPLIANCE WITH NATIONAL ELECTRICAL CODE, ARTICLE 410-21.

E. CEILING LIGHTS ARE TO BE WIRED TO THE BAR JOIST MEMBERS AT THE DIAGONAL CORNERS..

F. COORDINATE LIGHTING WITH SPRINKLER & MECHANICAL DRAWINGS.

G. REFERENCE TO HEIGHT OF OUTLET OR RECEPTACLE SHALL BE MEASURED FROM FINISHED FLOOR TO CENTER OF OUTLET OR RECEPTACLE.

H. ALL RECEPTACLES SHALL BE GROUNDING TYPE.

I. ALL RECEPTACLES AND SWITCHES SHALL HAVE TWO (2) REVOLUTIONS OF ELECTRICAL TAPE (SCOTCH 33+) OVER ALL THE TERMINALS. TO PREVENT ACCIDENTAL CONTACT WITH THE JUNCTION BOX OR OUTLET BOX..

CONDUIT SIZE TO BE PER NEC. PVC CONDUIT AND FITTINGS ARE ACCEPTABLE ONLY BELOW SUBBASE MATERIAL OF GROUND BEARING FLOOR SLABS WHERE SUCH USE IS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.

K. CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (EMT), RIGID STEEL (SIE PER NEC), OR MC CABLE WHERE ALLOWED BY CODE.WHERE MC CABLE IS USED, PROPER SECUREMENT AN SUPPORT (AT INTERVALS NOT EXCEEDING 6 FEET) SHALL BE FOLLOWED PER NEC ART. 330.

L. ELECTRICAL CONTRACTOR TO PROVIDE JUNCTION BOX AND CONDUIT STUB-UP ABOVE CEILING FOR ALL LOW VOLTAGE CABLING..

M. DIMENSION IS FROM FINISED WALL. SEE ARCHITECTURAL FOR WALL THICKNESS.

N. FIELD COORDINATE EXACT LOCATION OF OUTLETS AS DETERMINED BY THE ACTUAL FURNITURE LAY OUT. VERIFY WIT FIXTURE PLAN.

O. COORDINATE WITH OTHER DISCIPLINES FOR ELECTRICAL REQUIREMENTS OF EQUIPMENT NOT SHOWN ON DETAILS (I.E. ROOF-TOP UNITES, UNIT HEATERS, FANS, ETC.).

P. EC SHALL VERIFY IN FIELD ALL EQUIPMENT CONNECTIONS AND REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION OF DEVICES. VERIFY ALL DEVICES LOCATIONS AND MOUNTING HEIGHTS WITH EQUIPMENT PROVIDER. EC SHALL MAKE ADJUSTMENTS IN FIELD TO MATCH ACTUAL EQUIPMENT BEING INSTALLED, AS DIRECTORY BY THE EQUIPMENT PROVIDE.

Q. CONTRACTOR IS REQUIRED TO INSTALL STANDARD RECEPTACLES FOR CIRCUITS DEDICATED TO SPECIFIC EQUIPMENT. SUBJECT TO THE APPROVAL OF CODE ENFORCING AGENCY.

R. GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL SHALL BE PROVIDED AS REQUIRED IN 210.8()B). THE GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE

SERVICE CONDUCTORS ARE DESIGNED BASED ON THE SERVICE DISTANCE OF 100' TO MEET THE 2% VOLTAGE DROP PER NEC.IF THE SERVICE CONDUCTOR IS BETWEEN: 100'-150'-E.C.SHALL INCREASE THE CONDUCTOR BY ONE SIZE(S) LARGER THAN DESIGN. 150'-200'-E.C. SHALL INCREASE THE CONDUCTOR BY TWO SIZE(S) LARGER THAN DESIGN

T. E.C. IS TO VERIFY WITH LOCAL AHJ FOR REQUIREMENT OF EXTERIOR EMERGENCY EGRESS LIGHTING AND ADJUST BID TO INCORPORATE AS NEEDED.

200'-250' - E.C. SHALL INCREASE THE CONDUCTOR BY THREE SIZE(S) LARGER THAN DESIGN

A.I.C OF PANELS AND SERVICE ENTRANCE EQUIPMENT IS BASED ON TYPICAL TRANSFORMER SPECIFICATIONS. CONTRACTOR SHALL FIELD VERIFY EXACT UTILITY A.I.C RATING AND MAKE EQUIPMENT ADJUSTMENTS AS REQUIRED IN THE FIELD AT NO EXTRA COST TO OWNER. CONTRACTOR SHALL NOTIFY ENGINEER OFANY FIELD CHANGES BASED ON UTILITY EQUIPMENT DATA.

FIELD VERIFY ALL CONDITIONS

ALL WIRING LAYOUTS, PIPING LAYOUTS AND DUCT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATIONS OF CONDUITS, DUCTS OR PIPING, AND START OF INSTALLATION. ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THE BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

ABBREVIATIONS

ABOVE FINISHED FLOOR

AWG AMERICAN WIRE GAUGE CIRCUIT BREAKER CIRCUIT CEILING CURRENT TRANSFORMER CU COPPER DWG DRAWING

AMPERE

AFF

ELECTRICAL CONTRACTOR EXHAUST FAN ΕM EMERGENCY

EMT ELECTRICAL METALLIC TUBING ENCL ENCLOSURE EWC ELECTRIC WATER COOLER ELECTRIC WATER HEATER

EWH FIRE ALARM FΑ FAAP FIRE ALARM ANNUNCIATOR PANEL FATC FIRE ALARM TERMINAL CABINET FACP

FIRE ALARM CONTROL PANEL GFI, GFCI GROUND FAULT CIRCUIT INTERRUPTER GND,G GROUND

HACR HEATING/AIR CONDITIONING-RATED HD HAND DRYER

HORSEPOWER ISOLATED GROUND JUNCTION BOX

KCMIL THOUSAND CIRCULAR MILS KVA KILOVOLT AMPERE KWKILOWATT

MCB MAIN CIRCUIT BREAKER MDP MLO MAIN DISTRIBUTION PANEL MAIN LUGS ONLY NEC

NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NON-FUSED

NFPA NATIONAL FIRE PROTECTION ASSOCIATION NIGHT LIGHT

POLYVINYL CHLORIDE CONDUIT PVC REF REFRIGERATOR

SPD SURGE PROTECTIVE DEVICE SWITCH

SW SWBD SWITCHBOARD TYP TYPICAL UG UNDERGROUND

UON UNLESS OTHERWISE NOTED VOLT WEATHER PROOF

WEATHER RESISTANT XFMR TRANSFORMER

NOT ALL ABBREVIATIONS WILL BE USED. USED FOR REFERENCE PURPOSES ONLY.

## POWER LEGEND

REFERENCE ARCHITECTURAL ELEVATION PLANS FOR DEVICE MOUNTING HEIGHT UNLESS OTHERWISE NOTED (UON).

HOMERUN TO PANEL INDICATED (CONCEALED). MINIMUM 3/4" CONDUIT. UNLESS 🖰 OTHERWISE NOTED PROVIDE #12 CONDUCTORS AS REQUIRED BY THE NUMBER OF CIRCUITS SHOWN. INCLUDE #12 GROUND AND #12 NEUTRAL CONDUCTORS UON. THERE SHALL BE A MAXIMUM OF 2 BRANCH CIRCUITS FOR SINGLE PHASE AND 3 BRANCH CIRCUITS FOR THREE PHASE PER HOMERUN (AS INDICATED ON THE PLANS). TEXT SHOWN BY HOMERUN INDICATES PANELBOARD DESIGNATION AND CIRCUIT NUMBER(S).

→ HOMERUN TO PANEL INDICATED (EXPOSSED).

CONDUIT CONCEALED IN WALL OR ABOVE CEILING SPACE. UNLESS OTHERWISE NOTED PROVIDE #12 CONDUCTORS AS REQUIRED BY THE NUMBER OF CIRCUITS SHOWN. INCLUDE #12 GROUND AND #12 NEUTRAL. MINIMUM 1/2" CONDUIT.

UNDERGROUND OR BELOW SLAB CONDUIT. UNLESS OTHERWISE NOTED PROVIDE #12 CONDUCTORS AS REQUIRED BY THE NUMBER OF CIRCUITS SHOWN. INCLUDE #12 GROUND AND #12 NEUTRAL. MINIMUM 3/4" CONDUIT.

------- CONDUIT TO ELECTRICAL DEVICE (EXPOSED).

GROUNDING ELECTRODE CONDUCTOR AS INDICATED

CEILING OR WALL MOUNTED JUNCTION BOX — UON SIZE AS REQUIRED BY NEC

MOTOR AS INDICATED

SPD

SURGE PROTECTIVE DEVICE AS INDICATED

SINGLE PUSHBUTTON SWITCH MOUNTED AT +44" AFG, UNO.

PANELBOARDS - (FLUSH/SURFACE MOUNT)

UTILITY TRANSFORMER AS INDICATED (PAD OR POLE MOUNTED)

SIGNAL TRANSFORMER, MOUNTED AT 9'-0" AFF IN STOCKROOM AND ABOVE CEILING IN SALES AREA

METER SOCKET

NON-FUSIBLE DISCONNECT SWITCH - HEAVY DUTY

FUSIBLE DISCONNECT SWITCH - HEAVY DUTY - FUSED AS INDICATED ON PLANS

ENCLOSED CIRCUIT BREAKER — HEAVY DUTY 

SINGLE RECEPTACLE — 20A, 120V, (WHITE)

DUPLEX RECEPTACLE — 20A, 120V, (WHITE)

HUBBELL IG5362 DUPLEX RECEPTACLE (ORANGE)

DOUBLE DUPLEX RECEPTACLE - 20A, 120V, (WHITE)

 $\Rightarrow$ DUPLEX RECEPTACLE — 20A, 120V — CEILING MOUNTED (WHITE)

BELL, 4" DIAMETER SINGLE MAGNET VIBRATING, TYPE 24 VAC, 30 VA, EDWARDS #55-665. MOUNT ABOVE CEILING.

POWER POLE

SWITCH - VARIABLE SPEED FAN CONTROL

## LOW VOLTAGE LEGEND

REFERENCE ARCHITECTURAL ELEVATION PLANS FOR DEVICE MOUNTING HEIGHT UNLESS OTHERWISE NOTED (UON).

VOICE OUTLET BOX, THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A 4" SQ. X 1 OUTLET BOX WITH SINGLE GANG PLASTER RING AND NO COVER PLATE. FLUSH MOUNT IN WALL +48" AFF TO CENTER, UNO, AND STUB 1/2" EMT TO +12" ABOVE SUSPENDED CEILING OR JOIST SPACE IF NO CEILING EXISTS

## POWER PLAN NOTES

- PROVIDE CEILING MOUNTED RECEPTACLE FOR SHOW WINDOWS AS REQUIRED BY CODE. VERIFY WITH LOCAL AGENCY. VERIFY EXACT LOCATION WITH ARCHITECT.
- 2 PROVIDE QUAD RECEPTACLE ABOVE COUNTER. VERIFY EXACT LOCATION WITH ARCHITECT.
- $\langle 3 \rangle$  AUDIO SYSTEM ROUGH-IN WITH SINGLE GANG BOX W/ CONDUIT STUBBED TO CEILING.
- PROVIDE 2'X2'X3/4" PLYWOOD BACKER BOARD PAINTED WHITE ANS INSTALLED AT +82"AFF TO BOTTOM OF 4 PROVIDE BOARD.
- PROVIDE NEW 30A, 208V, 3PH NEMA 3R FUSED DISCONNECT SWITCH TO SERVE NEW MECHANICAL EQUIPMENT. FUSE PER MANUFACTURER RECOMMENDATION. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL
- (6) PROVIDE 30A, 208V, 1Ø, NEMA 1, GENERAL DUTY, NON-FUSED DISCONNECT SWITCH FOR NEW WATER HEATER.
- NEW EXHAUST FAN TO BE CONTROLLED VIA OCCUPANCY SENSOR USED FOR RESTROOM LIGHTS. REFER TO SHEET E300 FOR ADDITIONAL INFORMATION.
- $\langle 8 \rangle$  PROVIDE EXTRA DATA LINE TO CEILING ABOVE CONSULTATION ROOM (PROVIDE 15' LOOP) FOR FUTURE USE.
- 9 PROVIDE CAT6 2 PORT OUTLET INSTALLED BELOW RACK AT +72" AFF TO BOTTOM OF OUTLET.
- $\langle 10 \rangle$  PROVIDE CAT6 4 PORT OUTLET INSTALLED BELOW RACK AT +72" AFF TO BOTTOM OF OUTLET.
- PROVIDE BUCK-BOOST TRANSFORMER MOUNTED IN ACCESIBLE CEILING SPACE. TRANSFORMER SHALL BE 240V 1-PHASE OUT. ELECTRICAL CONTRACTOR SHALL WORK WITH THEIR DISTRIBUTOR TO DETERMINE THE EXACT BUCK-BOOST TRANSFORMER REQUIRED. BASED ON THE LOAD CHARACTERISTICS OF THE EQUIPMENT BEING SERVED.
- SINGLE RECEPTACLE FOR ZIMMER CRYO 6. GRAY, COMMERCIAL GRADE, 3-WIRE, 20A, 125V WITH MATCHING GRAY FACEPLATE.

ENGINEER OF RECORD



11/13/23

ISSUE DATE DESCRIPTION 10/12/23 | SD REVIEW 10/20/23 | CD REVIEW 1 | 11/10/23 | PERMIT SET

PROJECT INFORMATION

11/10/23

K.CRAIG

AS NOTED

PROJECT NO: SCALE: DRAWN BY: K.NORBURY

SHEET TITLE

CHECKED BY:

POWER PLAN AND NOTES

SHEET NUMBER

