

THE CONTRACTOR SHALL VERIFY AND FIELD CHECK ALL DIMENSIONS AND CONDITIONS BEFORE TO THE START OF ANY WORK. THE CONTRACTOR SHALL REVIEW ALL DIMENSIONS AND CONDITIONS BEFORE THE START OF ANY WORK AND REPORT TO THE ARCHITECT AND/OR ENGINEER ANY DISCREPANCIES BEFORE REQUEST A CLARIFICATION PRIOR TO THE START OF ANY WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL EXPENSE MADE NECESSARY BY REASON OF LATER INTERPRETATION OF THE DRAWINGS.

ELECTRICAL GENERAL NOTES

- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE FOLLOWING STANDARDS:
a.) NATIONAL ELECTRIC CODE.
b.) STATE BUILDING CODES.
c.) CODES AND REQUIREMENTS OF THE LOCAL CITY.
d.) NATIONAL FIRE CODE, N.F.P.A.
e.) ENGINEERS REQUIREMENTS.
- ALL DIMENSIONS AND EXACT EQUIPMENT LOCATIONS ARE TO BE VERIFIED WITH MECHANICAL AND ARCHITECTURAL DRAWINGS AND CONDITIONS IN THE FIELD.
- ALL WIRE SIZES REFER TO COPPER CONDUCTORS. UON.
- THE GENERAL CONTRACTOR SHALL PROVIDE ACCESS TO ALL CONCEALED EQUIPMENT.
- ALL ELECTRICAL WORK SHALL BE COORDINATED WITH AIR CONDITIONING WORK, CABINET WORK, ALL PARTITION WORK, ETC.
- ALL CONDUITS SHALL BE 3/4" MINIMUM SIZE THROUGHOUT.
- ALL ELECTRICAL WIRING CONDUIT SHALL BE CONCEALED UNLESS OTHERWISE NOTED.
- ALL LIGHT FIXTURES SHALL BE INDEPENDENTLY SUPPORTED.
- ALL LAMPS SHALL BE MANUFACTURED BY G.E./SILVANIA AND FURNISHED BY THIS CONTRACTOR, UNLESS NOTED OTHERWISE.
- THIS CONTRACTOR TO OBTAIN ALL PERMITS AND PERFORM ALL TEST AS REQUIRED BY CODES AND DOCUMENTS.
- THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND CONSULT WITH MECHANICAL DRAWINGS FOR POWER REQUIREMENTS OF THOSE TRADES.
- THE CONTRACTOR SHALL SURVEY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND INFORM THE ENGINEER OF ANY DISCREPANCIES. THE CONTRACTOR SHALL CONSTRUCT ALL WORK TO SUIT EXISTING CONDITIONS.
- ALL WIRING TO BE TYPE MC CABLE.
- ALL PANELS ARE TO BE PHASE BALANCED WITH A REPORT PROVIDED TO THE LANDLORD.
- CONTRACTOR IS TO UPDATE ALL PANEL SCHEDULES AFFECTED BY HIS WORK, AND PROVIDE WRITTEN COPIES TO THE BUILDING ENGINEER AND LANDLORD.
- ALL PANELS TO BE PROVIDED WITH A TYPED SCHEDULE. A COPY OF THE SCHEDULE IS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- THIS CONTRACTOR SHALL SURVEY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND INFORM THE ENGINEER OF ANY DISCREPANCIES. THE CONTRACTOR SHALL CONSTRUCT ALL WORK TO BUILDING STANDARDS AS REQUIRED BY THE OWNER.
- FIRE AND LIFE SAFETY TIE-IN SHALL BE COMPLETED BY THE BUILDING VENDOR. FOR THIS PROJECT THE BUILDING VENDOR IS "APPLIED FIRE PROTECTION" PER LANDLORDS REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE FOR TELEPHONE, DATA & SECURITY SYSTEMS: GEM BOX, WITH CONDUIT STUB-UP WITH DRAG LINE FOR CONDUIT RUN IN INSULATED WALLS CONTRACTOR TO PROVIDE DRAGLINE FOR TELEPHONE/DATA JACKS INSTALLED ON NON-INSULATED WALLS. DEVICES, CABLES, WALL PLATES AND SYSTEM TO BE PROVIDED AND INSTALLED BY OWNERS TELEPHONE, DATA & SECURITY.
- ALL EQUIPMENT TO BE BUILDING STANDARD UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY BUILDING SHUT-DOWNS WITH OWNER, AND AFFECTED TENANTS. ALL SHUT-DOWNS TO BE PERFORMED AFTER HOURS. THERE SHALL BE NO EXTRA COST SUBMITTED BY THIS CONTRACTOR FOR WORK PERFORMED AFTER HOURS. AFTER HOURS WORK SHALL BE INCLUDED IN THE BASE BID.
- CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH PARTITIONS OR SLABS WITH A U.L. APPROVED FIRE/SMOKE STOP TO MAINTAIN THE INTEGRITY OF THE FIRE RATING.
- ALL CABLES RUN IN THE CEILING MUST BE RATED FOR SUCH USE AND IN ACCORDANCE WITH CODES.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LABOR, MATERIALS, SUPERVISION, SUPPLIES AND REQUIREMENTS, REQUIRED OR OBVIOUSLY NECESSARY TO INSTALL, COMPLETE READY FOR USE ELECTRICAL SYSTEMS, EQUIPMENT AND ASSOCIATED ITEMS INCLUDED ON THE PLANS.
- THE WORK SHALL BE COORDINATED WITH ALL OTHER TRADES AND PROVIDE OTHERS WITH NECESSARY INFORMATION TO COMPLETE THIS INSTALLATION.
- OBTAIN ALL NECESSARY PERMITS COVERING THIS WORK AND SUBMIT TO THE OWNER, UPON COMPLETION, A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE PROPER AUTHORITIES. ANY TEST REQUIRED BY CODES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH SPECIFICATIONS ON DRAWINGS.
- ANY WORK INSTALLED CONTRARY TO, OR WITHOUT APPROVAL BY THE ENGINEER SHALL BE SUBJECT TO CHANGE AS DIRECTED BY THE ENGINEER AND NO EXTRA COMPENSATION WILL BE ALLOWED FOR THE CONTRACTOR MAKING THESE CHANGES.
- CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS.
- THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENTS A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS APPROVED BY THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL SHALL BE MAINTAINED AS INDICATED ON THE DRAWINGS. CONTRACTOR MUST SUBMIT PLANS FOR APPROVAL PRIOR TO INSTALLATION.
- EMERGENCY EXITS, DIRECTIONAL AND EGRESS LIGHTS SHALL BE CIRCUITING WITH MINIMUM NUMBER OF 10 AWG CONDUCTORS IN 3/4" CONDUIT TO THE NEAREST EMERGENCY PANEL.
- ALL CONDUITS AND EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE N.F.P.A. AND LOCAL AND STATE CODES GOVERNING SUCH INSTALLATION AND SHALL BE U.L. LISTED.
- CONTRACTOR TO VERIFY CEILING FINISH CONSTRUCTION WITH FINAL ARCHITECTURAL DRAWINGS PRIOR TO ORDERING FIXTURES AND ORDER FIXTURES WITH PROPER MOUNTING ARRANGEMENTS TO BE COMPATIBLE WITH TYPE OF CEILING WHICH FIXTURE IS TO BE MOUNTED.
- ALL LIGHT FIXTURES SHALL HAVE BASE BUILDING ELECTRONIC BALLAST
- FIRE ALARM SYSTEM IS TO BE TESTED WITH A LETTER BY CONTRACTOR SUBMITTED TO THE LANDLORD.
- ALL CONDUITS SHALL BE TERMINATED WITH FLEXIBLE CONNECTIONS SO AS TO PERMIT NEAT CONNECTIONS TO MOTORS AND OTHER EQUIPMENT THAT VIBRATES.
- ALL BRANCH C/B'S TO BE RATED 20A. MINIMUM WITH #12 WIRE. UON.
- SURFACE MOUNTED PANEL BOARDS AND OTHER SUCH EQUIPMENT SHALL BE MOUNTED WITH A 1/4" AIR SPACE BETWEEN ENCLOSURE AND WALL. THE DISTANCE FROM TOP CIRCUIT BREAKER HANDLE TO FLOOR SHALL NOT EXCEED 6"-6" UNLESS OTHERWISE NOTED.
- ALL EMERGENCY LIGHTS, EXIT, SMOKE DETECTOR SHALL BE APPROVED BY FIRE MARSHALL. EQUIPMENT SHALL BE ADJUSTED AND/OR ADDED AS REQUIRED.
- ALL PULL BOXES, JUNCTION BOXES, AND SWITCH BOXES IN OFFICE AREA SHALL BE NEMA 1.
- ALL JUNCTION BOXES INDICATED AND/OR REQUIRED SHALL BE SIZED TO ACCOMMODATE INCOMING AND OUTGOING FEEDERS.
- WHERE DEVICES ARE REMOVED FROM WALL DESIGNATED TO REMAIN, CONTRACTOR SHALL PATCH WALL AND PROVIDE MATERIALS AND LABOR AS REQUIRED TO MATCH EXISTING.
- ALL WIRING FOR FIRE ALARM SYSTEM SHALL BE INSTALLED IN 3/4" C, UNLESS OTHERWISE INDICATED. REFER TO OVERVIEW SECTION FOR ADDITIONAL REQUIREMENTS.
- ALL UNUSED WIRING IN CEILING SHALL BE REMOVED BACK TO SOURCE. IF C/B IS NOT REUSED C/B SHALL BE RELABELED AS SPARE.
- CONTRACTOR SHALL COORDINATE/VERIFY ALL ROOM NUMBERS AND NAMES WITH ARCHITECTURAL DRAWINGS.
- CONTRACTOR SHALL COORDINATE ALL RECEPTACLE AND SWITCH HEIGHTS WITH ARCHITECTURAL DRAWINGS.
- CONSULT TENANT OR TENANT'S COMMUNICATIONS VENDOR REGARDING TELEPHONE AND DATA CABLE REQUIREMENTS. ALL CABLE TO BE PENUM RATED.
- ALL TELEPHONE, DATA & SECURITY WIRING SHALL BE DONE BY SEPARATE TENANT SELECTED CONTRACTOR, ELECTRICAL CONTRACTOR TO COORDINATE WITH TENANT'S SELECTED CONTRACTOR FOR ALL REQUIREMENTS.
- CIRCUITING INDICATED ON DRAWINGS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL RE-BALANCE AND CIRCUIT AS NOT TO DISRUPT ANY EXISTING CORE CIRCUITS/EQUIPMENT. RE-BALANCE PANELS AND PROVIDE NEW, TYPED, PANEL SCHEDULES.
- GANG OUTLETS AND/OR SWITCHES WITH SINGLE FACE PLATE WHERE MULTIPLE DEVICES APPEAR IN A SINGLE LOCATION ON THE DRAWINGS.
- CONSULT TENANT OR TENANT'S SECURITY CONTRACTOR FOR SPECIFICATION AND SPECIAL INSTALLATION REQUIREMENTS.
- LOCATION OF ALL FLOOR MOUNTED OUTLETS TO BE CONFIRMED W/ ARCHITECT PRIOR TO CORE DRILL.
- COORDINATE LOCATION OF ALL FURNITURE WITH INSTALLER PRIOR TO PULLING CABLE, COORDINATE WITH FURNITURE SUPPLIER SYSTEM IN-FEEDS.
- PANEL BOARDS SHALL BE STANDARD CATALOG ITEMS COMPLYING WITH NEC, UL AND NEMA STANDARDS AND BEAR THE LABEL OF UNDERWRITER'S LABORATORIES. PROVIDE COPPER FULL-SIZE PHASE AND NEUTRAL BUSES WHICH HAVE BEEN RATED IN ACCORDANCE WITH UL 67 HEATE-RISE TESTS. BUS BAR CONNECTIONS SHALL BE COLUMN CONSECUTIVE PHASE-SEQUENCE TYPE. BOTH 120/208V AND 277/480V PANEL BOARDS SHALL HAVE BUS BARS DRILLED AND EQUIPPED WITH ALL HARDWARE FOR BOLT-ON, MOLDED GASE CIRCUIT BREAKERS. PROVIDE A BOLTED ON COPPER GROUNDING BUS WITH MAIN LUG(S), PANEL BOARD SHORT CIRCUIT BRACING AND BREAKER INTERRUPTING CAPACITY SHALL BE AS INDICATED ON THE DRAWINGS BUT SHALL NOT BE LESS THAN 14,000 AMPERES RMS SYMMETRICAL FOR 277/480V SERVICE AND 10,000 AMPERES RMS SYMMETRICAL FOR 120/208V SERVICE. PROVIDE MANUFACTURER'S STANDARD #16-GAGE (MINIMUM) GALVANEAL OR GALVANIZED SHEET STEEL CABINET WITH ENAMEL FRONT "HINGED DOOR IN DOOR" AND A TYPED CIRCUIT DIRECTORY. PANEL BOARD MAIN LUG(S) CONNECTED TO #6 AWG OR LARGER, COPPER CONDUCTORS SHALL BE FURNISHED TO ACCOMMODATE COMPRESSION CONNECTORS. ADEQUATE WIRING SPACE SHALL BE PROVIDED TO ACCOMMODATE THE COMPRESSION CONNECTORS. NEW TENANT RENOVATION PANEL BOARDS SHALL MATCH EXISTING PANEL BOARDS PROVIDED THE ABOVE MINIMUM REQUIREMENTS HAVE BEEN MET.
- MOTOR HORSE POWER RATINGS ARE APPROXIMATE AND MAY VARY BY MANUFACTURERS. CONTRACTOR SHALL VERIFY EXACT SIZE OF EQUIPMENT WITH APPROVED SHOP DRAWINGS. ADJUSTMENTS SHALL BE MADE IN SIZE OF BREAKERS, SWITCHES, WIRE AND MOTOR CONTROLS INCLUDING HEATERS BASED UPON THE MOTOR INSTALLED.
- PROVIDE EXTERNAL DISCONNECT SWITCH WITH FUSE FOR MECHANICAL EQUIPMENT. SIZE DISCONNECT SWITCH AND FUSE AS RECOMMENDED BY EQUIPMENT MANUFACTURER.
- WHERE THE LENGTH OF A HOMERUN FROM PANEL TO FIRST OUTLET EXCEEDS 75 FEET FOR A 120 VOLT CIRCUIT OR 175 FEET FOR A 277 VOLT CIRCUIT, THE CONDUCTOR SIZE SHALL BE INCREASED ONE SIZE LARGER THAN INDICATED TO COMPENSATE FOR VOLTAGE DROP.
- THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON DRAWING OR NOT.
- CONTRACTOR SHALL VERIFY ALL EQUIPMENT REQUIREMENTS BEFORE INSTALLATION CONDUIT OR CONDUCTORS FROM POWER SOURCE TO EQUIPMENT TERMINATION.
- ALL WORK IS NEW UNLESS OTHERWISE NOTED.

ELECTRICAL LEGENDS

DESIGNATION	DESCRIPTION	MFG HGT TO CENTERLINE AFF (UON)
S	SINGLE POLE SWITCH	4'-0"
⊖	GFCI DUPLEX RECEPTACLE - NEMA 5-20R	18"
⊖	DUPLEX RECEPTACLE - NEMA 5-20R	18" UON
J	JUNCTION BOX	18"
⊖	SPECIAL PURPOSE AS NOTED. COORDINATE WITH EQUIPMENT MANUFACTURER.	18"
⊖	COMBINATION DATA/TELEPHONE OUTLET STUB OUT 1" EC 6" INTO CEILING SPACE	
⊖	GROUND	
⊖	PANELBOARD	6'-0" TO TOP
⊖	MOTOR CONNECTION	
T	TIME CLOCK	
F	PULL STATION FOR COOKING AREA	
↘	HOMERUN TO PANELBOARD - NO. OF ARROWHEADS INDICATE NO. OF CIRCUITS. NUMERALS & LETTERS ADJACENT TO ARROWHEADS INDICATE ASSIGNED PANEL & CIRCUIT NO.'S	
⊖	TICK MARKS IN HOMERUN OR BRANCH CIRCUITRY, UNLESS OTHERWISE SCHEDULED, INDICATE THE QUANTITY (WHERE MORE THAN TWO) OF CURRENT CARRYING CONDUCTORS. NUMERAL ADJACENT TO TICKS INDICATES WIRE SIZE IF OTHER THAN #12. ALL WIRINGS SHALL ALSO CONTAIN AN INSULATED GROUNDING CONDUCTOR SIZED PER NEC. (NOT SHOWN).	
⊖	GENERAL CIRCUITRY	
⊖	FLOOR DUPLEX RECEPTACLE - NEMA 5-20R	48"
⊖	MANUAL MOTOR CONTROLLER SWITCH WITH THERMAL PROTECTION	
⊖	FACTORY CONNECTION - TYPE & RATING NOTED	
⊖	FUSED SAFETY DISCONNECT SWITCH (NEMA 1 UON) - UPPER NUMERAL DENOTES SWITCH SIZE. LOWER NUMERAL DENOTES FUSE SIZE - 3 POLE UON	5'-0" TO TOP
⊖	NON-FUSED SAFETY DISCONNECT SWITCH - NUMERAL DENOTES SWITCH SIZE - 3P UON	5'-0" TO TOP
↘	CEILING MOUNTED LIGHTING OCCUPANCY SENSOR. ARROWS (IF SHOWN) INDICATE DIRECTION WHICH SENSOR IS TO BE ORIENTED. "NUMBER" INDICATES SENSOR TYPE. SUBLETTER (IF SHOWN) INDICATES SWITCHED LIGHTING FIXTURE GROUP SENSOR IS TO CONTROL.	
⊖	"M" INDICATES WALL LINE-VOLTAGE SENSOR	
⊖	"L" INDICATES CEILING-MOUNTED LINE-VOLTAGE SENSOR	
⊖	"LV" INDICATES CEILING-MOUNTED LOW-VOLTAGE SENSOR (REQUIRES POWER PACK)	

ABBREVIATIONS

A	AMPERE	(N)	NEW EQUIPMENT
AF	ABOVE FINISHED FLOOR	NEC	NATIONAL ELECTRICAL CODE
AC	AMPERES INTERRUPTING CAPACITY	P	POLE
C	CONDUIT/EMT	PC	COMPUTER
CB	CIRCUIT BREAKER	(R)	EXISTING TO BE REMOVED AND RELOCATED
(E)	EXISTING TO REMAIN - CONTINUE IN SERVICE	(RE)	RELOCATED EQUIPMENT TO BE DETERMINED
EC	EMPTY CONDUIT/EMT	TBD	TYPICAL
ECB	ENCLOSED CIRCUIT BREAKER	TC	TIME CLOCK
G,GRD	GROUND	UON	UNLESS OTHERWISE NOTED
GE	GROUND ELECTRODE CONDUCTOR	V	VOLT
HP	HORSEPOWER	W	WITH
MCB	MAIN CIRCUIT BREAKER	WF	WEATHERPROOF
MLO	MAIN LUGS ONLY	XFMR	TRANSFORMER
N	NEUTRAL	(X)	REMOVE WITH ALL CIRCUITRY THERETO
LC	LIGHTING CONTRACTOR		

REVISION BLOCK	
MARK	DESCRIPTION
<p>00/00/00 REVISION DESCRIPTION</p>	
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PROJECT TITLE	
DESCRIPTION	
SEAL	
SHEET TITLE	
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ISSUE BLOCK	
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