ELECTRICAL SPECIFICATION

GENERAL

ALL ELECTRICAL WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND AUTHORITIES HAVING JURISDICTION.

ALL EQUIPMENT SHALL BE NEW AND UNDERWRITERS LABORATORIES (U.L.) APPROVED.

ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. SIZES AND LOCATION OF EQUIPMENT AND WIRING ARE SHOWN TO SCALE WHERE POSSIBLE, BUT MAY BE DISTORTED FOR CLARITY ON THE DRAWINGS. FINAL LOCATIONS OF OUTLETS AND EQUIPMENT SHALL BE SHOWN IN ENLARGED DETAILS OR AS APPROVED BY THE ARCHITECT OR HIS REPRESENTATIVE. IT IS NOT WITHIN THE SCOPE OF DRAWINGS TO SHOW ALL THE NECESSARY BEADS, OFFSETS, PULLBOXES AND OBSTRUCTIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL HIS WORK TO CONFORM TO THE STRUCTURE, MAINTAIN HEAD—ROOM, AND KEEP OPENINGS AND PASSAGEWAYS CLEAR.

ALL WARE CHALL BE DEDECOMED IN ACCORDANCE WITH BUILDING OWNED DECLIDEMENTS

THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND SHALL COMPARE THE DRAWINGS WITH EXISTING ELECTRICAL INSTALLATIONS, AND SHALL THOROUGHLY FAMILLARIZE HIMSELF WITH ALL EXISTING CONDITIONS WITHIN THE SCOPE OF WORK. BY THE ACT OF SUBMITHING A BID, THE CONTRACTOR WILL BE DEEMED TO HAVE MADE SUCH EXAMINATION AND TO HAVE ACCEPTED SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCE THEREFORE IN PREPARATION HIS BID.

CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH ALL TRADES ANY ELECTRICAL REFERENCES ON ARCHITECTURAL DRAWINGS.

VERIFY LOCATIONS OF ALL ELECTRICAL EQUIPMENT WITH ARCHITECTURAL DRAWINGS AND INTERIOR DETAILS AND FINISHES. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS, TRIM, PANELING, HUNG CELIUNGS, AND THE LIKE AND CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO THE OWNER.

FURNISH AND INSTALL WIRING FOR EQUIPMENT FURNISHED BY OTHERS AS SHOWN ON DRAWINGS, AND INSTALL MOTOR STARTERS. COORDINATE WITH OTHER TRADES AND DETAILS FOR INSTALLATION. THE TERM "WIRING" AS USED HERBIN INCLUDES FURNISHING AND INSTALLINE CONDUIT, WIRE, JUNICTION BOXES AND DISCONNECTS AND MAKING CONNECTIONS. CHECK ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR EQUIPMENT TO BE INSTALLED BY OTHERS. BE RESPONSIBLE FOR PROPER WIRING AND RECESSARY ELECTRICAL ADJUSTMENTS TO EQUIPMENT. CONFORM TO SPECIFIED REQUIREMENTS OF THE EQUIPMENT.

SECURE AND PAY ALL PERMITS AND FEES NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK.

THE CONTRACTOR SHALL DO ALL CUTTING AND PATCHING OF THE EXISTING CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER INSTALLATION OF THE ELECTRICAL WORK. ALL PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP, AND FINISH AND SHALL ACCURATELY MATCH ALL SURROUNDING WORK.

AFTER COMPLETION OF WORK AND PERIODICALLY AS REQUIRED DURING PROGRESS OF WORK UNDER THIS SECTION, CLEAN UP THE RESULTANT DEBRIS FROM THIS WORK AND REMOVE FROM THE SITE.

LIGHTING FIXTURES:

FURNISH AND INSTALL LIGHTING FIXTURES AS SHOWN ON THE ELECTRICAL AND ARCHITECTURAL DRAWINGS. VERIFY EXACT LOCATIONS OF FIXTURES WITH ARCHITECTURAL REFLECTED CEILING PLANS.

SEE SCHEDULE FOR FIXTURE SPECIFICATIONS. (OWNER TO SELECT ACTUAL LIGHTING FIXTURES)

PROVIDE REQUIRED ACCESSORIES FOR CEILING TYPES. COORDINATE CEILING TYPES WITH CEILING CONTRACTOR PRIOR TO THE ORDERING OF APPROVED LIGHTING FIXTURES.

FIXTURES SHALL BE SECURELY FASTENED TO THE CEILING FRAMING MEMBER BY MECHANICAL MEANS, SUCH AS BOLTS, SCREWS, OR RIVETS. CLIPS IDENTIFIED FOR USE WITH THE TYPE OF CEILING FRAMING MEMBER(S) AND FIXTURE(S) SHALL ALSO BE PERMITTED.

FIXTURES WITH BATTERY PACK SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR WITH BATTERY PACK SIMILAR TO LIGHT ALARMS CATINO. AM4. COORDINATE WITH FIXTURE MANUFACTURER FOR BATTERY PACK MOUNTING. FIXTURES SHALL BE WIRED TO BE SWITCHABLE. TWO LAMPS IN EACH FIXTURE.

ALL BRANCH CIRCUIT WIRING FOR LIGHTING SHALL BE NO. 12 AWG, TYPE THINN, AND SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING ABOVE THE HUNG CELING. THE EMT SHALL BE EXPOPRITED ACCORDING TO CODES HAVING JURISDICTION BASED ON THE NUMBER AND SIZE OF CONDUCTORS ENTERING AND LEZAMING THE BOX.

ALL FLUORESCENT LAMPS SHALL BE WHITE, OR AS SELECTED BY ARCHITECT.

ALL FLUORESCENT BALLASTS SHALL BE ELECTRONIC CBM/ETL OR EQUAL, CLASS P.

ALL INCANDESCENT LAMPS SHALL BE 130 VOLT.

ALL INCANDESCENT FIXTURES SHALL BE EQUIPPED WITH THERMAL PROTECTION.

RE-LAMP ALL INCANDESCENT LIGHTING FIXTURES PRIOR TO OWNER OCCUPANCY.

PANELBOARDS:

ALL PANELBOARDS SHALL BE OF THE ENCLOSED TYPE, FLUSH OR SURFACE MOUNTED, AS REQUIRED, IN STEEL CABINETS, CODE GAUGE, WITH STEEL TRIM CONCEALED HINGES, DOORS AND FLUSH TYPE LOCKS, ALL KEYED ALIKE. SIMILAR TO ELECTION CH, METROPOLITAN OR ELECTING SWITCHBOARDS.

ALL BUSSES, INCLUDING NEUTRAL AND GROUND BUS, SHALL BE MINIMUM 98 PERCENT CONDUCTIVITY, HARD DRAWN COPPER, SILVER OR TIN PLATED JOINTS, AND SIZED ON THE BASIS OF 1000 AMPERES PER SQUARE INCH CROSS SECTIONAL AREA BUSSES SHALL BE ARRANGED FOR SEQUENCE PHASING.

PANELBOARDS SHALL BE EQUIPPED WITH BOLT-ON MOLDED CASE CIRCUIT BREAKERS OF THE TYPE, NUMBER OF POLES, TRIP SIZES, AND INTERRUPTING CAPACITY AS PER BUILDING REQUIREMENTS, OR AS SHOWN ON DRAWINGS.

CABINETS SHALL BE OF SUFFICIENT SIZE TO ALLOW A GUTTER SPACE OF AT LEAST 6 INCHES ON SIDES, TOP AND BOTTOM.

BACK BOXES SHALL BE CONSTRUCTED OF CODE GAUGE SHEET STEEL, GALVANIZED; TRIMS SHALL BE PRIMED FOR FINISH PAINTING BY OTHERS:

DOORS AND TRIM SHALL EACH BE IN ONE PIECE SO DESIGNED THAT DOORS WILL OPEN 180 DEGREES. DOORS SHALL BE FASTENED TO TRIMS WITH SEMI-CONCEALED, PIAND HINGES WITH NON-FERROUS PINS. TRIMS SHALL

A CIRCUIT DIRECTORY WITH METAL FRAME AND GLASSINE PANEL SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. UPON COMPLETION OF THE PROJECT, THE DIRECTORY SHALL BE TYPEWRITTEN, INDICATING THE SERVICE CONTROLLED BY EACH CIRCUIT FOR NEW AND EXISTING PANELS AND CIRCUITS.

CLEAN, VACUUM AND TIGHTEN ALL CONNECTORS AND CONNECTIONS IN EXISTING ELECTRICAL EQUIPMENT REUSED.

SEAL PANEL KNOCK-OUTS NOT REUSED.

DISCONNECT SWITCHES SHALL BE OMOB FUSED OR NON-FUSED (AS NOTED OR AS REQUIRED) NEMA HEAVY DUTY EXTERNALLY OPERATED WHERE NOT FURNISHED WITH STARTING EQUIPMENT AND ALL OTHER POINTS REQUIRED BY CODE. FUSES SHALL BE BUSSMAN OR GOULD CURRENT LIMITING TYPE, MINIMUM 100,000 AIC, CIRCUIT BREAKERS MINIMUM 10,000 AIC, UNLESS OTHERWISE INDICATED.

PROVIDE NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT, WHITE LAMICOID WITH 3/4 INCH BLACK LETTERING. PROVIDE HANDLE-LOCKS FOR ALL CIRCUIT BREAKER NIGHT LIGHTS, EXIT LIGHTS, EXIT LIGHTS WITH BATTERY PACKS.

DEVICES:

DUPLEX RECEPTACLES FOR WALL AND FLOOR CONVENIENCE OUTLETS SHALL BE 2-POLE, 3-WIRE, GROUNDED, 15 AMPERE, NEMA CONFIGURATION 5-15R, HOSPITAL GRADE COLOR AS SELECTED AND AS APPROVED. DUPLEX RECEPTACLES FOR DATA SYSTEM OUTLETS SHALL BE SAME AS CONVENIENCE OUTLETS BUT ORANGE COLOR, AND 3-POLE FOR ISOLATED GROUND INSTALLATION.

SINGLE POLE SWITCHES SHALL BE 20 AMPERE ARROW-HART CAT. #1991; 3-WAY SWITCHES SHALL BE 20 AMPERE, ARROW-HART CAT. # 1993.

SINGLE POLE AND/OR 3 WAY SWITCHES FOR ALL AREAS WITH WALL DIMMERS SHALL BE LUTRON NOVA N-1P-S AND/OR N-3P-S.

BREAKGLASS SWITCH: SIMILAR TO ACME CAT. #798-3, LABEL AS DIRECTED BY OWNER.

MULTIPLE GROUPED DEVICES SHALL BE MOUNTED UNDER A COMMON PLATE, UNLESS OTHERWISE NOTED.

TOGGLE SWITCH OVERLOAD PROTECTION: SIMILAR TO ALLEN BRADLEY CAT. #600-TAX4, HEATER ELEMENT SIZE AS REQUIRED, UNLESS OTHERWISE NOTED.

DEVICE PLATES SHALL BE STAINLESS STEEL, SATIN FINISH, OR AS DIRECTED BY ARCHITECT.

RACEWAYS:

FEEDERS FOR THE NEW PANELBOARDS SHALL BE RUN IN FULL WEIGHT RIGID STEEL, HOT DIPPED GALVANIZED CONDUIT. ALL ELBOWS SHALL BE HOT DIPPED GALVANIZED RIGID STEEL AND FITTINGS SHALL BE OF CAST IRON OR CAST IRON ALLOY GALVANIZED OR CADDUMN PLATED.

BRANCH CIRCUIT WIRING ABOVE HUNG CEILINGS AND IN ACCESSIBLE LOCATIONS SHALL BE RUN IN ARMORED CABLE (BX) TYPE AC OR MC (ARMORED CABLE NOT TO BE INSTALLED FOR DC CIRCUITS), OR ELECTRIC METALLIC TUBING (FIG.). THE EAST SHALL BE OF MILLED STEEL TUBING, THE INTERIOR OF THE TUBING SHALL BE COATED WITH A SUITABLE PAINT OR LACQUIER. COMPRESSION TYPE CONNECTIONS SHALL BE USED FOR ALL EMT CONNECTIONS. SEALTITE FLEXIBLE CONDUIT FOR VIBRATING EQUIPMENT (MOTORS, TRANSFORMERS, ETC.). BRANCH CIRCUIT WIRING IN INACCESSIBLE LOCATIONS SHALL BE RUN IN RIGID STEEL OR IMC.

FIRE ALARM AND SMOKE DETECTION SYSTEM SHALL BE RUN IN RIGID STEEL.

MINIMUM SIZE CONDUIT 3/4". UNLESS OTHERWISE NOTED.

CUT CONDUIT ENDS SQUARE, REAM SMOOTH. PAINT MALE THREADS OF FIELD THREADED RACEWAYS WITH GRAPHITE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLINGS.

PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY SHALL BE WITHIN THREE INCHES (37) OF STEAM OR HOT WATER PIPES, OR APPLIANCES, EXCEPT CROSSINGS WHERE RACEWAY SHALL BE AT LEAST ONE INCH (17) FROM PIPE COVER.

RUN ALL RACEWAYS PARALLEL AND/OR PERPENDICULAR TO BUILDING WALLS, HORIZONTAL OR CROSS RUNS IN FULL HEIGHT PARTITIONS AND WALLS ARE NOT PERMITTED.

RUN ALL CONDUIT CONCEALED IN FINISHED AREAS UNLESS INDICATED OTHERWISE ON THE DRAWINGS.

CONDUIT SERVING RECEPTACLES AND SIGNAL OUTLETS MOUNTED IN ISLAND STATIONS SHALL BE ROUTED TO WALL MOUNTED JUNCTION BOX (WITH BLANK COVER PLATE) VIA FURRED COLUMNS. CHASE FLOOR AS REQUIRED (IN ACCORDANCE WITH ARCHITECTURAL AND STRUCTURAL REQUIREMENTS).

CONNECT RACEWAY TO MOTOR TERMINAL BOXES WITH FLEXIBLE (SEALTITE) CONDUIT; MINIMUM 18" IN LENGTH AND 50% SLACK. DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.

WIRE AND CABLE

WIRE AND CABLE SHALL BE COPPER, SIZES AS INDICATED ON DRAWINGS, AND SHALL NOT BE LESS THAN #12 AWG. ALL #8 AWG WIRE AND LARGER SHALL BE STRANDED. ALL #10 AWG WIRE AND SMALLER SHALL BE SOLID. VOLTAGE RATING OF INSULTION SHALL BE 600 VOLTS.

TYPE THHN/XHHW INSULATION SHALL BE USED FOR ALL BRANCH CIRCUIT WIRING. THE AMPACITIES OF THHN WIRE SHALL BE BASED ON THE ALLOWABLE AMPACITIES OF THW WIRE. FEEDER CABLE INSULATION AS ASPROVICE.

RECESSED LIGHTING FIXTURES IN HUNG CEILING SHALL BE SUPPLIED WITH TYPE TFN INSULATED WIRE IN FLEXIBLE METALLIC CONDUIT IN LENGTHS NOT EXCEEDING 6' FROM ADJACENT JUNCTION BOXES.

FACTORY COLOR CODING FOR WIRE AND CABLE SHALL BE AS FOLLOWS: 120/208V-BLACK, RED, BLUE, WHITE, FOR PHASES A, B, C, AND NEUTRAL, RESPECTIVELY. 277/480V-BROWN, ORANGE, YELLOW, WHITE, FOR PHASES A, B, C, AND NEUTRAL, RESPECTIVELY.

GROUND WIRES SHALL BE GREEN.

WIRE COLOR CODING: WHERE COLOR CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING CONDUCTORS (MINNIUM LENGTH 6) IN ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.

LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTIONS. IN RACEWAY OVER 10 FEET IN WHICH WIRNO IS NOT INSTALLED, FURNISH FISH WIRE.

LIGHTING AND CONVENIENCE RECEPTACLE POWER WIRING FOR CIRCUITS LESS THAN 100 FEET SHALL BE #12 AWG UNLESS OTHERWISE NOTED. WIRE SIZES SHALL BE #10 FOR CIRCUITS GREATER THAN 100 FEET. NOT MORE THAN THREE (3) LIGHTING OR CONVENIENCE OUTLET CIRCUITS SHALL BE PERMITTED IN ONE CONDUIT UNLESS OTHERWISE NOTED.

ALL WIRES SHALL BE IDENTIFIED BY CIRCUIT NUMBERS IN ALL CABINETS, BOXES, WIRING TROUGHS, OTHER ENCLOSURES, AT ALL SPLICES, TERMINATION POINTS, ETC.

CONTRACTOR SHALL OBTAIN FROM OWNER ALL GUIDELINES FOR SIGNAL COMMUNICATION SYSTEM WIRING.

OUTLET AND JUNCTION BOXES:

ALL OUTLET BOXES SHALL BE CODE GAUGE, HOT DIPPED GALVANIZED STAMPED STEEL.

OUTLET BOXES FOR RECEPTACLES AND SWITCHES IN DRY WALL PARTITIONS SHALL BE 4" SQUARE BY 1-1/2" MINIMUM DEPTH AND SHALL BE FITTED WITH SQUARE CORNERED DEVICE COVERS OF DEPTH EQUAL TO THE DRY WALL THICKNESS.

OUTLET BOXES FOR RECEPTACLES IN LOW DRY WALL PARTITIONS SHALL BE SELECTED BY THE ELECTRICAL CONTRACTOR TO FIT THE DEPTH OF THE PARTITIONS SELECTED BY THE ARCHITECT.

ALL ISLAND STATION OUTLETS MUST HAVE AN OUTLET BOX WITH BLANK COVER 12" ABOVE FINISHED FLOORS IN

JUNCTION BOXES: LOCATE GENERALLY NOT EXPOSED IN FINISHED SPACE. WHEN NECESSARY, RE-ROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT.

SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIRE PROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.

LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS. AT OR NEAR DOOR, INSTALL SWITCH IN SIDE OPPOSITE HINGE, VERIFY FINAL DOOR HINGE LOCATION IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.

LOCATIONS INDICATED FOR LOCAL WALL SWITCHES, CONTROLLERS, EMERGENCY PUSHBUTTONS, RECEPTACLES, ETC., ARE SUBJECT TO MODIFICATIONS.

HEIGHTS OF OUTLET FROM FINISHED FLOOR TO CENTER LINE OF OUTLETS SHALL BE AS PER ARCHITECTURAL DRAWNISS. EXCEPTIONS: AT THE JUNCTION OF DIFFERENT WALL FINISH MATERIALS OR MOULDING, OR BREAK IN WALL SURFACE IN VIOLATION OF CODE REQUIREMENTS.

OFFSET BACK-TO-BACK OUTLETS. THROUGH THE WALL TYPE SHALL NOT BE PERMITTED.

GROUNDING:

GROUND ALL CONDUITS, CABINETS, MOTORS, PANELS, AND OTHER EXPOSED NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ALL PROVISIONS OF THE [NATIONAL] [NEW YORK CITY] ELECTRICAL CODE OF ILOCAL CODE THAT MAY APPLY.

PROVIDE GROUND WIRE FOR BRANCH CIRCUITING AS INDICATED, MINIMUM #12 AWG

CURRENTS

SECURE ALL SUPPORTS TO BUILDING STRUCTURE AS REQUIRED, SUPPORT HORIZONTAL RUNS OF METALLIC RACEWAYS NOT MORE THAN 10' APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH, OR AT RIGHT ANGLES TO, WALL.

SUPPORT PANEL, JUNCTION BOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON RACEWAYS.

ALL ANCHORS, FASTENERS, CLAMPS, ETC. SHALL BE MADE OF STEEL AND SHALL NOT CONTAIN ANY LEAD, WOOD, PLASTIC, ETC.

SLEEVES:

FIRE STOP ALL RACEWAY PENETRATRIONS THROUGH RATED WALLS.

PROVIDE WATERPROOF SLEEVES, AS APPROVED FOR ROOF, FLOOR AND WALL PENETRATIONS. ALL PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS OR PARTITIONS SHALL BE SEALED TO PREVENT THE SPREAD OF SMOKE AND FIRE THROUGH THEM. THE FIRE RATING OF THE PENETRATION SEAL SHALL BE AT LEAST THAT OF THE FLOOR OR WALL INTO WHICH IT IS INSTALLED.

THE FOAM SEALANT SHALL MEET ALL THE FIRE TEST AND HOSE STREAM TEST. REQUIREMENTS OF ASTM E-119-73, AND SHALL BE U.L. CLASSIFIED AS A WALL OPENING PROTECTIVE DEVICE AS MANUFACTURED BY CHASE TECHNOLOGY CORPORATION.

TELEPHONE, SIGNAL, DATA AND COMMUNICATION SYSTEM:

PROVIDE ALL OUTLETS AS SHOWN ON PLANS. WALL OUTLETS SHALL BE 4-11/16" SQUARE BOX WITH HOLE, FACEPLATE, AND GROMMET.

CONDUIT SIZES SHALL BE AS DETAILED, MINIMUM 3/4".

COORDINATE WITH SYSTEM MANUFACTURE

RUN CONDUITS FROM OUTLET TO TERMINATION AS REQUIRED BY RESPECTIVE MANUFACTURER.

CONDUITS TERMINATED IN HUNG CEILING SHALL STUB OUT INTO CEILING TO NEAREST ACCESSIBLE LOCATION MINIMUM 12" WITH BUSHING.

CONNECTION TO EXISTING WORK:

PLAN INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH REQULAR OPERATION OF EXISTING FACILITIES, ALL SYSTEM SHUTDOWNS AFFECTING OTHER AREAS SHALL BE COORDINATED WITH THE BUILDING OWNER.

CONNECT NEW WORK TO EXISTING IN NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED WHILE INSTALLING NEW WORK TO ACCEPTABLE CONDITION AS DETERMINED BY THE BUILDING OWNER.

DISCONNECT, REMOVE, OR RELOCATE ELECTRICAL MATERIALS AND EQUIPMENT AS NOTED AND AS REQUIRED BY CHANGES IN CONSTRUCTION.

MAINTAIN CONTINUITY OF ELECTRICAL CIRCUITS TO REMAIN.

CUT AND CAP FLUSH TO SURFACES ALL RACEWAYS TO BE ABANDONED AND DISCONNECT WIRING AT LOAD (EQUIPMENT) AND LINE SIDES.

DISPOSE OF ALL MATERIAL AND EQUIPMENT AS DIRECTED.

MAINTAIN CONTINUOUS OPERATION OF EXISTING FACILITIES AFFECTED BY THIS WORK.

REMOVE CONDUCTORS FROM EXISTING RACEWAYS TO BE REWIRED. CLEAN RACEWAY AS REQUIRED PRIOR TO REWIRING.

ALARM AND EMERGENCY SYSTEM SHALL NOT BE INTERRUPTED.

TEMPORARY SHUTDOWNS WHEN REQUIRED SHALL BE MADE ONLY WITH WRITTEN CONSENT OF OWNER AT TIMES NOT TO INTERFERE WITH NORMAL OPERATION AND AT NO ADDITIONAL CHARGE.

ALL REQUESTED WORK FOR TIE-IN TO THE EXISTING EQUIPMENT SHALL BE ACCOMPLISHED AFTER HÖÜRS,"ON EXACT DAY AND TIME TO BE DIRECTED BY OWNER.

UPON COMPLETION OF ALL ELECTRICAL WORK, CONTRACTOR SHALL TEST FOR GROUNDS AND SHORTS, TO INSURE PROPER OPERATION OF ELECTRICAL EQUIPMENT. REPAIR OR REPLACE FAULTY EQUIPMENT AT NO ADDITIONAL

CUST TO THE OWNER.

GUARANTEE FOR ONE YEAR AFTER ACCEPTANCE BY OWNER ALL WORKMANSHIP AND MATERIALS FURNISHED.

ELECTRICAL CONTRACTOR SHALL SUBMIT REPRODUCIBLE "AS-BUILT" RECORD DRAWINGS FOR BUILDING FILES AT COMPLETION OF THE PROJECT. (SCALE 1/4"=1"-0").

QUANTITIES AND TYPES OF SUBMITTALS SHALL BE AS REQUESTED

ELECTE	RICAL ABBREVIATIONS	FS FT G	FS BOX (CONDUIT BOX) FOOT OR FEET GROUND	SH SN SPEC	SHIELDED SOLID NEUTRAL SPECIFICATIONS
A AC ACT AFF BG BLDG C B CKI CLG CO CU DISC DN DWG EC ELEC EWC FBO EXP FACP FCO FIXT FLUOR FRUOR	AMPERE ALTERNATING CURRENT ABOVE COUNTER TOP ABOVE FINISHED FLOOR BREAK GLASS SWITCH BUILDING CONDUIT CIRCUIT BREAKER CIRCUIT CENTER LINE CEILING CONDUIT ONLY COPPER DISCONNECT DOWN DRAWING EMPTY CONDUIT ELEVATION ELECTRICAL ELECTRIC WATER COOLER FUNNISHED BY OTHERS EXPOSED EXISTING EXTERIOR FIRE ALARM CONTROL PANEL FUSTURE FUNDERSCENT FIRE ALARM CONTROL PANEL FUSTURE FUNDERSCENT FIXTURE FLUORESCENT FLUORESCENT FLUORESCENT FLOOR MACHINE	GFI HC	GROUND FAULT INTERRUPTING HUNG CEILING HORSEPOWER HIGH VOLTAGE HERTZ INTERRUPTING CAPACITY INCANDESCENT JUNCTION BOX KILOVOLT KILOVOLT AMPERE KILOVOLT AMPERE KILOWATT LIGHTING MAIN CIRCUIT BREAKER THOUSAND CIRCULAR MILLS MECHANICAL EQUIPMENT ROOM MAIN FUSED SWITCH MOUNTED NEUTRAL NOT IN CONTRACT NOT TO SCALE PHASE PULL BOX PHASE PULL BOX PHASE PAIKEL POMER RECEPTACLE ROOM	SW TC TC TEL TV TYP UH UON V VA VIF VI W WP	SWITCH TELEPHONE TELEPHONE TELEVISION TYPICAL UNIT HEATER UNLESS OTHERWISE NOTED VOLT VOLT AMPERE VERIFY IN FIELD VAPORTIGHT WATT WEATHERPROOF (NEMA 3R)

NOTE: ALL WORK TO CONFORM TO NATIONAL ELECTRIC CODE 2017
AND BE INSTALLED BY LICENSED ELECTRICIANS

ELECTRICAL SYMBOL LIST

EXIT LIGHT DIRECTIONAL ARROWS WHERE INDICATED — SHADED AREAS INDICATE ILLUMINATED FACE FACES

1 X 4 FLUORESCENT CEILING MOUNTED FIXTURE - TYPE "A"

1 x 4 FLUORESCENT CEILING MOUNTED FIXTURE ON EMERGENCY
POWER

2 x 2 FLUORESCENT LIGHT FIXTURE

2 x 2 FLUORESCENT LIGHT FIXTURE
2 x 2 FLUORESCENT LIGHT FIXTURE ON EMERGENCY POWER

2 x 4 FLUORESCENT LIGHT FIXTURE

2 x 4 FLUORESCENT LIGHT FIXTURE ON EMERGENCY POWER

Sa SINGLE POLE SWITCH CONTROLLING OUTLET "a"

\$3 3-WAY SWITCH

-⊖ SINGLE RECEPTACLE - FLUSH WALL MOUNTED, 20 AMPERES
- DUPLEX CONVENIENCE RECEPTACLE

DUPLEX CONVENIENCE RECEPTACLE WITH GFI

COMBINATION SWITCH AND DUPLEX CONVENIENCE RECEPTACLE

►w TELEPHONE OUTL W = WALL MOUN

DATA OUTLE

				STRUCTURAL ENGINEER		ELECTRICAL NOTES AND SPECS	DRAWING NO. of		
					MECHANICAL ENGINEER	RUBIN RESIDENCE 38 ROGER AVENUE		E-1	
						Richard J. Pierce, Architect	3-24-2021	9-8	
DATE	DESCRIPTION	BY	REV			9 Stratford Terrace, Cranford , New Jersey 07016 (908) 338 5037	SCALE AS NOTED	3-0	