

ELECTRICAL NOTES

- 1.) ALL ELECTRICAL WORK TO BE PERFORMED BY LICENSED TRADESMEN.
- 2.) ALL SWITCHES TO BE PLACED AT 36" A.F.F. UNLESS OTHERWISE NOTED.
- 3.) ALL ARCHITECTURAL LIGHTING TO BE ON DIMMER SWITCHES WETHER OR NOT NOTED.
- 4.) ALL OUTLETS TO BE PLACED AT 18" A.F.F. UNLESS OTHERWISE NOTED.
- 5.) CONTRACTOR TO INCLUDE ALL TRANSFORMERS AS REQUIRED BY LIGHTING.
- 6.) CONTRACTOR TO INCLUDE ANY RELAYS OR REMOTE HIGH WATTAGE DIMMERS AS MAY BE REQUIRED FOR GROUPING OF LIGHTS AS SHOWN ON THE DRAWINGS.
- 7.) ARCHITECT IS TO BE INFORMED IMMEDIATELY IF DESIGN LOAD EXCEEDS EXISTING SERVICE CAPACITY.
- 8.) LICENSED ELECTRICIAN TO CALCULATE CIRCUITS AS PER NYC CODE AND GOOD PRACTICE.
- 9.) ALL OUTLETS THAT ARE LOCATED NEAR SINKS (I.E.: BATHROOM AND KITCHEN, TO BE GFI PROTECTED CIRCUITS.
- 10.) ALL FIXTURES INDICATED 'BY OWNER' ARE TO BE INSTALLED BY ELECTRICIAN.
- 11.) ALL ARCHITECTURAL LIGHTING TO BE ON DIMMER SWITCHES.

ELECTRICAL SPECIFICATIONS

1.) GENERAL CONDITIONS.

- A. PERFORM ALL WORK IN ACCORDANCE WITH LOCAL BUILDING CODE, AND THE NATIONAL ELECTRICAL CODE O.S.H.A. REGULATIONS OF ALL LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION. PROVIDE OWNER WITH CERTIFICATES OF INSPECTION. SEE BUILDING BASE STANDARDS & REGULATION A COPY WHICH IS AVAILABLE THROUGH BLDG. MGT.
- B. DO ALL NECESSARY CUTTING AND ROUGH PATCHING. THE FOLLOWING WORK WILL BE DONE BY OTHERS: FINISH PAINTING AND PATCHING, MASONRY AND CONCRETE FOUNDATIONS FOR EQUIPMENT.
- C. THESE DRAWINGS ARE TO INDICATE THE SIZE AND GENERAL LOCATION OF WORK TO BE DONE. THE EXACTING LOCATIONS ARE TO BE COORDINATED IN THE FIELD.
- D. PRIOR TO STARTING ANY WORK, PURCHASES OF EQUIPMENT, ETC., COORDINATE THE WORK WITH OTHER TRADES. CONFER WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION AND ARRANGE ALL PARTS OF THIS WORK AND EQUIPMENT OF OTHERS, WITH THE BUILDING CONSTRUCTION AND WITH ARCHITECTURAL FINISH SO THAT IT WILL HARMONIZE IN SERVICE AND APPEARANCE. IN THE EVENT THERE IS A CONFLICT IN COORDINATION BETWEEN TRADES, THE ARCHITECT WILL RESOLVE IT.
- E. BIDDERS, BEFORE SUBMITTING A PROPOSAL, SHALL VISIT AND EXAMINE CAREFULLY THE AREAS AFFECTED BY THIS WORK TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND WITH THE DIFFICULTIES THAT WILL ATTEND THE EXECUTION OF THIS WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH AN EXAMINATION HAS BEEN MADE AND LATER CLAIMS WILL NOT BE RECOGNIZED FOR EXTRA LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD SUCH EXAMINATION BEEN MADE.
- F. ALL WORK SHALL BE GUARANTEED DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE INSTALLATION, AND ANY PORTIONS OF THE WORK WHICH DEVELOP DEFECTS DURING THAT TIME SHALL BE REPLACED OR REPAIRED IN A MANNER SATISFACTORY TO THE ENGINEER.
- G. FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING AS REQUIRED BY THE OWNER.
- H. PREPARE AND FURNISH TO THE OWNER 'AS-BUILT' PLANS FOR ALL WORK INSTALLED.
- I. SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW AND COMMENTS OF LIGHTING FIXTURES, PANEL BOARDS, FIRE ALARM SYSTEM, ETC., BEFORE FABRICATION OF THE EQUIPMENT IS STARTED.
- J. PROVIDE TEMPORARY LIGHT AND POWER FOR THE NEW CONSTRUCTION AREAS IN ACCORDANCE WITH LOCAL CODE AND ACCEPTED STANDARDS ESTABLISHED BY O.S.H.A. ENERGY COSTS WILL BE BORN BY THE OWNER.
- K. ALL PARTS OF THE WORK AND ASSOCIATED EQUIPMENT SHALL BE TESTED AND ADJUSTED TO WORK PROPERLY AND BE LEFT IN PERFECT OPERATING CONDITION. THIS SHALL INCLUDE METER TESTS BETWEEN PHASES AND BETWEEN EACH CONTRACTORS PHASE & TIMES KEEP AID GROUND OF ALL FEEDERS, AND PANEL BOARDS. CORRECT DEFECTS DISCLOSED BY THESE TESTS ON REPAIRED OR REPLACED WORK.
- L. JOB MEETINGS SHALL BE HELD AT THE TIME AND PLACE AS DIRECTED BY THE OWNERS REPRESENTATIVE.
- M. SPLICES IN CONDUCTORS SHALL BE ELIMINATED WHEREVER POSSIBLE, AND WHERE NECESSARY ARE ONLY TO BE MADE IN READILY ACCESSIBLE JUNCTION BOXES.
- N. CLEANUP STORING OF MATERIALS, TOOLS AND EQUIPMENT AFTER EACH WORK PERIOD.
- O. PROVIDE APPROVED FIRE STOPPING AT ALL PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS AND PARTITIONS.

2.) SCOPE OF WORK

THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, SUPPLIES, MATERIALS, PERMITS, AND SHALL PERFORM ALL OPERATIONS INCLUDING CORE DRILLING, HOISTING, CUTTING AND PATCHING, CHANNELING AND CHASING NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL WORK ON THIS PROJECT, COMPLETE IN STRICT ACCORDANCE WITH THESE SPECIFICATIONS AND THE DRAWINGS, AND READY FOR USE, THIS INCLUDES ALL ELECTRICAL WORK FROM THE POINT OF SUPPLY CONNECTIONS TO AND INCLUDING ALL OUTLETS, BOXES, EQUIPMENT, WIRING DEVICES, CONDUCTORS, FINISHED COVER PLATES, LIGHTING FIXTURES, AND, H.V.A.C. POWER.

ALL ITEMS OF LABOR, MATERIALS AND EQUIPMENT NOT SPECIFICALLY MENTIONED HEREIN OR SHOWN ON THE PLANS BUT INCIDENTAL TO, OR REQUIRED FOR THE COMPLETE INSTALLATION AND PROPER OPERATION OF THE WORK, SHALL BE PROVIDED AS IF CALLED FOR IN DETAIL BY THE SPECIFICATIONS. WHEREVER THE WORD 'PROVIDE' IS USED HEREIN, IT SHALL BE INTERPRETED AS 'FURNISH AND INSTALL'.

ELECTRICAL WORK SHALL INCLUDE BUT NOT NECESSARILY BE LIMITED TO THE FOLLOWING:

- A. LIGHTING FIXTURES, DEVICES, EQUIPMENT, ETC., AND PERFORMING OF ALL WORK AS SHOWN OR INDICATED ON THE DRAWINGS AND IN ALL THIS SCOPE OF WORK UNLESS OTHERWISE NOTED.
- B. A COMPLETE DISTRIBUTION SYSTEM SHALL BE FURNISHED AS REQUIRED TO ENERGIZE ALL ELECTRIC CONVENIENCE AND ISOLATED GROUND AND POWER RECEPTACLES, AND LIGHTING FIXTURES TO THE CAPACITY AND CHARACTERISTICS SPECIFIED.
- C. THE AFOREMENTIONED SYSTEM SHALL INCLUDE BUT NOT NECESSARILY BE LIMITED TO ELECTRICAL DISTRIBUTION, CONDUCTORS, OUTLETS, DEVICES COVER PLATES AND ALL REQUIRED CONNECTIONS.
- D. CONDUIT, CONDUIT FITTINGS, WIRE WAYS, THROUGHS, PULL BOXES, JUNCTION BOXES, OUTLET BOXES AND ALL APPURTENANCES NECESSARY FOR RACEWAY SYSTEMS INCLUDING NECESSARY SUPPORTS AND FASTENERS.
- E. CONVENTIONAL GROUNDING AND BONDING.
- G. AS BUILT DRAWINGS SHALL BE SUBMITTED ON COMPACT DISK (CD) IN AUTO CAD 2002 FORMAT.
- F. PERMITS INSPECTIONS, FEES AND CERTIFICATE OF INSPECTIONS FROM LOCAL FIRE DEPARTMENT AND NATIONAL BOARD OF FIRE UNDERWRITERS CERTIFICATES SHALL BE SUBMITTED TO COMPANY BEFORE FINAL PAYMENT IS MADE.
- G. TAGGING AND IDENTIFICATION OF ALL EQUIPMENT AND SERVICES.
- H. LABELING OF ALL ELECTRICAL EQUIPMENT AND DEVICES.
- I. PROVIDE UPDATED TYPEDWRITTEN PANEL BOARD, ETC., SCHEDULES. LABEL
- J. LIGHTING FIXTURES AND LAMPS, AND LAMPS SWITCHES AND SWITCH LEGS.
- K. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FILING AND OBTAINING APPROVAL FROM LOCAL FIRE DEPARTMENT ELECTRICAL DIVISION.
- L. EXPANSION FITTING WHERE APPLICABLE
- M. FIRE ALARM DEVICES, CONDUIT, WIRING, ETC.
- N. INSTALL ALL CONTROL WIRING AND POWER WIRING FOR ALL MECHANICAL EQUIPMENT ON THE PROJECT.
- O. MAKE ALL FINAL CONNECTIONS FOR ALL APPLIANCES IN ALL APARTMENTS.
- P. SUPPLY AND INSTALL ALL WIRING FOR BUILDING INTERCOM SYSTEM.
- Q. EACH RESIDENTIAL UNIT TO HAVE ONE CABLE TV HOME RUN AND 2 CABLE CAT5E HOME RUNS TO CELLAR.

3.) COORDINATION WITH OTHER TRADES

- A. CONTRACTOR SHALL CONSULT THE PLANS COVERING THE WORK FOR THE VARIOUS OTHER TRADES, THE FIELD LAYOUTS OF THE CONTRACTOR FOR THE TRADES, AND THEIR SHOP DRAWINGS. HE SHALL BE GOVERNED ACCORDINGLY IN LAYING OUT HIS WORK. ACCESS TO THESE PLANS, LAYOUTS AND DRAWINGS MAY BE OBTAINED IN THE FIELD BY APPLYING TO THE OWNER OR THE GENERAL CONTRACTOR.
- B. CONTRACTOR SHALL AT ALL TIMES KEEP HIMSELF INFORMED OF THE PROGRESS OF THE GENERAL CONSTRUCTION CONTRACTOR. ALL CONSTRUCTION AND SHALL INSTALL ALL WORK THAT IS TO SECURE PROPER LOCATION WITHOUT DELAY TO THE WORK OF TRADES. HE SHALL ALSO PROPERLY ATTEND TO THE ELECTRICAL WORK DURING THE PROGRESS OF THE BUILDING TO PREVENT MISALIGNMENT OF AND DAMAGES TO THE ELECTRICAL WORK.
- C. CONTRACTOR SHALL EXAMINE THE WORK OF OTHER TRADES, INsofar AS THEIR WORK INVOLVES THE INSTALLATION AND SCHEDULING OF HIS WORK AND SHALL IN NO CASE ATTACH TO, COVER UP, FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL HIS WORK IN A MANNER WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES
- D. ALL OUTLETS AND RECEPTACLES SHALL BE CENTERED WITH REGARD TO PANELING, TRIM EQUIPMENT ETC. AND SHALL LINE UP COURSES. FAILURE TO OBSERVE THIS REQUIREMENT SHALL RESULT IN CORRECTION BY THE CONTRACTOR AT HIS EXPENSE
- F. WHEN THE WORK OF OTHER TRADES BECOMES PART OF THIS DIVISION THE CONTRACTOR SHALL EITHER EMPLOY ARTISANS OF THAT TRADES, INCLUDING MONEY IN HIS BID, TO COVER ALL CONTINGENCIES SO THE INTERTRADE OVERLAPPING WILL CAUSE DELAYS OR EXTRA EXPENSE TO THE OWNER
- G. THE CONTRACTOR IS HERBY INSTRUCTED TO FAMILIARIZE HIMSELF WITH THE WORK OF THE OTHER TRADES ON THE JOB AND THE TYPE OF CONSTRUCTION SO THAT NO EXTRA EXPENSE SHALL BE INCURRED TOO THE OWNER. HE SHALL COOPERATE FULLY WITH THE OWNER AND THE OTHER TRADES.

4.) WORKMANSHIP

- A. THE INSTALLATION SHALL BE SO THAT ITS SEVERAL COMPONENT PARTS WILL FUNCTION AS A WORKABLE SYSTEM COMPLETE WITH ALL ACCESSORIES NECESSARY FOR ITS OPERATION AND SHALL BE LEFT WITH ALL EQUIPMENT PROPERLY ADJUSTED AND IN WORKING ORDER. THE WORK SHALL BE EXECUTED IN CONFORMITY WITH THE BEST ACCEPTED STANDARD PRACTICE, SO AS TO CONTRIBUTE TO EFFICIENCY OF OPERATION AND MAINTENANCE, MAXIMUM ACCESSIBILITY AND APPEARANCE, AND MINIMUM COST IN CONSTRUCTION FUTURE ALTERATIONS AND ADDITIONS ADJUSTING IT SELF EASILY TO BUILDING USAGE.
- B. ELECTRICAL WORK SHALL BE INSTALLED BY JOURNEYMAN ELECTRICIANS UNDER THE DIRECT SUPERVISION OF A COMPETENT FOREMAN AT ALL TIMES. AT NO TIME SHALL ELECTRICAL WORK BE INSTALLED BY APPRENTICE ELECTRICIANS WITHOUT IMMEDIATE ON-THE-JOB SUPERVISION OF A JOURNEYMAN ELECTRICIAN.
- 5.) CLEANING
- A. WHEN DIRECTED BY OWNER, REMOVE FROM ENTIRE INSTALLATION OF WORK OF THIS SECTION ALL PROTECTING MATERIALS, DIRT, DUST, SMEARS, STAINS, PAINT SPOTS, AND THE LIKE AND LEAVE IN A CLEAN CONDITION. CLEAN AND REMOVE ALL SMUDGES, FINGERPRINTS, ETC. FROM LIGHTING FIXTURES AFTER INSTALLATION.
- B. THE ELECTRICAL CONTRACTOR SHALL AT THE CONCLUSION OF WORK OF THIS SECTION ALL PROTECTING MATERIALS, DIRT, DUST, SMEARS, STAINS, PAINT SPOTS, AND THE LIKE AND LEAVE IN A CLEAN CONDITION. CLEAN AND REMOVE ALL SMUDGES, FINGERPRINTS, ETC. FROM LIGHTING FIXTURES AFTER INSTALLATION.
- 6.) GUARANTEE
- A. THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, APPARATUS PARTS AND THE INSTALLATION AGAINST DEFECTS IN DESIGN, MATERIAL AND WORKMANSHIP, WHERE NOT OTHERWISE SPECIFIED, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF THE OWNERS SUBSTANTIAL USAGE OR OCCUPANCY OF THE PROJECT WHEREVER IS EARLIER. ANY PORTION OF THE SYSTEM FOUND TO BE DEFECTIVE WITHIN THE ABOVE STARTED PORTION OF THE SYSTEM FOUND TO BE DEFECTIVE WITHIN THE ABOVE STARTED PERIOD OF TIME SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 7.) INSPECTION AND TEST
- A. AUTHORIZED REPRESENTATIVES OF THE ARCHITECT / ENGINEER AND OWNER HAVE ACCESS TO AND THE PRIVILEGE OF OBSERVING ALL WORK AND MATERIALS AS THE WORK PROGRESSES. THESE REPRESENTATIVES WILL HAVE THE AUTHORITY TO APPROVE OR REJECT ANY WORK OR MATERIALS, WITH THE DRAWINGS, SPECIFICATIONS, LOCAL CODES AND STANDARD ENGINEERING PRACTICE AS A BASIS FOR ANY ACTION.
- B. ALL TESTS SHALL BE MADE BEFORE ANY CIRCUIT OR MAIN SWITCH IS MADE HOT. CIRCUITS SHALL BE PHASED OUT AND CONNECTED TO THE PANEL OR MAIN SWITCH IN A PROPER MANNER. LOADS SHALL BE DISTRIBUTED AS EVENLY AS POSSIBLE ON ALL PHASES, ALL WIRES SHALL BE ENTIRELY FREE FROM GROUND AND SHORT CIRCUITS.
- C. ELECTRICAL CONTRACTOR SHALL ASSIST THE ENGINEER IN THE OPENING AND OR REMOVING OF THE PANEL BOARD DURING INSPECTIONS AND TESTING FOR PROPER OPERATION.
- D. PROVIDE WRITTEN REPORT OF ALL TESTS TO ARCHITECT FOR RECORD.

8.) MATERIALS

- A. ALL MATERIALS, EQUIPMENT AND APPARATUS USED IN THE WORK OF THIS SECTION SHALL BE NEW AND SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS. OF THE LOCAL CODE ANY MATERIALS WHICH DONT COMPLY WITH THE MATERIALS WHICH DONT COMPLY WITH THE LOCAL CODE REQUIREMENTS OR ARE NOT GIVEN CONSIDERATION BY THE LOCAL CODE REQUIREMENTS SHALL NOT BE USED.
- B. IF AFTER INSTALLATION OPERATION OF ELECTRICAL SYSTEM OR EQUIPMENT PROVES TO BE DEFECTIVE BECAUSE OF DEFECTS IN MATERIALS, ERRORS OR OMISSIONS, THE CONTRACTOR SHALL ALSO REPLACE ALL MATERIALS AND EQUIPMENT DAMAGED BY DEFECTIVE EQUIPMENT AND AT NO COST TO THE OWNER. ALL WORK SHALL THEN BE INSPECTED AND APPROVED AS SPECIFIED UNDER THIS SPECIFICATION.
- 9.) CONDUCT OF WORK
- A. ALL WORK UNDER THIS CONTRACT WHICH MAY CAUSE INTERFERENCE WITH THE OWNERS AND BUILDINGS OPERATION SHALL BE DONE IN SUCH A MANNER, UNLESS OTHERWISE SPECIFIED, AS TO BE APPROVED BY THE OWNER. UNINTERRUPTED ELECTRICAL SERVICE SHALL BE MAINTAINED AT ALL TIMES. REMOVAL AND ALTERATIONS OF EQUIPMENT, CONDUIT AND WIRING AND THE INSTALLATION OF ALL WORK SHALL BE PERFORMED IN A MANNER TO MAINTAIN SERVICE AT ALL TIMES. THE CONTRACTOR SHALL MAKE TEMPORARY CONNECTIONS AS MAY BE REQUIRED TO PREVENT SERVICE INTERRUPTIONS.
- B. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL FURNISH A CERTIFICATE OF APPROVAL FROM THE LOCAL INSPECTING AUTHORITY HAVING JURISDICTION FOR APPROVING MATERIALS, EQUIPMENT, INSTALLATION AND PROCEDURES UNDER THIS SECTION AND SUCH OTHER CERTIFICATES PERTAINING TO THE ELECTRICAL WORK AS MAY BE REQUIRED BY THE LOCAL AND / OR STATE AUTHORITY FOR THE ISSUANCE OF CERTIFICATE OF OCCUPANCY. ALL EXPENSES ARISING FROM THE PROCUREMENT OF THESE CERTIFICATES SHALL BE PAID BY THE CONTRACTOR AND CERTIFICATES OF APPROVAL BEFORE REQUESTING FINAL PAYMENT.

10.) MATERIALS AND INSTALLATION

- A. GENERAL:
- (1) ALL WORK SHALL BE CAREFULLY BE LAID OUT IN ADVANCE SO THAT UNNECESSARY CUTTING, CHANNELING, CHASING OR DRILLING OF WALLS, PARTITIONS, FLOORS, CEILINGS OR OTHER ELECTRICAL WORK, IT SHALL BE CAREFULLY BE DONE IN SUCH A MANNER SO AS TO AVOID ANY DAMAGE.
- (2) ALL OPENINGS THROUGH CONCRETE WALLS OR FLOOR SLABS SHALL BE BORED WITH CORE TYPE DRILLING EQUIPMENT. CUTTING OF THESE OPENINGS WITH A JACK HAMMER OR BY SIMILAR METHODS WILL NOT BE ACCEPTABLE.
- (3) ALL ELECTRICAL WORK SHALL BE PROTECTED AGAINST DAMAGE DURING CONSTRUCTION AND ANY WORK DAMAGED OR MOVED OUT OF LINE AFTER ROUGH-IN SHALL BE REPAIRED AND RESET TO THE APPROVAL OF THE OWNER.
- (4) WALL SWITCHES SHALL BE RATED AT 20A, 120/277 VOLTS, QUITE OPERATION FOR AC INDUCTIVE LOADS UNLESS NOTED OTHERWISE.
- B. CONDUIT AND RACEWAYS:
- (1) RACEWAY TYPE
- (a) RIGID STEEL CONDUIT PERMITTED USES:
- 1.) WHERE EXPOSED TO MECHANICAL INJURY, WHERE SPECIFICALLY REQUIRED, INDOORS WHERE EXPOSED TO MOISTURE & WHERE REQUIRED BY CODES AND FOR ALL CIRCUITS IN EXCESS OF 600 VOLTS OUTDOOR/ EXTERIOR USE.
2. PAINT MALE THREADS OF FIELD THREADED CONDUIT WITH GRAPHITE BASE PIGMENT COMPOUND. BUTT CONDUIT ENDS WHERE SET IN CONCRETE.
- (b) EMT PERMITTED USES: WHERE INTENDED TO BE LEFT EXPOSED, I.E. CELLAR CEILINGS ETC.
- (c) FLEXIBLE STEEL CONDUIT PERMITTED USES:
- 1.) BRANCH CIRCUITING
- 2.) DRY LOCATIONS, DRY WALLS, HUNG CEILINGS HOLLOW BLOCK WALLS & FURRED SPACES.
- 3.) FOR SHORT CONNECTIONS WHERE RGS IS IMPRACTICABLE.
- 4.) FROM OUTLET BOX TO RECESSED LIGHT FIXTURE: MAX. 6FT. LENGTH.
- 5.) FOR EXPANSIONS, JOINT CROSSINGS, CROSS AT RIGHT ANGLES & ANCHOR ENDS.
- 6.) TRANSFORMER OR EQUIPMENT RACEWAY CONNECTIONS WHERE SOUND & VIBRATIONS ISOLATION IS REQUIRED.
- (2) CONDUIT SHALL NOT BE SMALLER THAN THE SIZES INDICATED OR SPECIFIED, AND WHERE NO SIZE IS INDICATED, THE CONTRACTOR SHALL SIZE THE CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL ELECTRICAL CODE OR THE NUMBER, SIZE AND TYPE OF WIRES INDICATED AND SPECIFIED FOR THE APPLICATION EXCEPT THAT NO BRANCH HOME RUNS SHALL BE LESS THAN 3/4" SIZE.
- (3) UNLESS OTHERWISE INDICATED ON THE DRAWINGS, CONDUIT SHALL BE CONCEALED IN CEILING AND WALLS AND SHALL BE KEPT AT LEAST 6" FROM PARALLEL RUNS OF FLUES OR WATER PIPES.
- (4) WHERE CONDUIT ENTERS PANEL BOXES, PULL BOXES OR OUTLET BOXES, IT SHALL BE SECURED IN PLACE BY GALVANIZED LOCK NUT ON THE OUTSIDE AND GALVANIZED LOCK NUT AND BUSHING ON THE INSIDE. BUSHING SHALL BE OF INSULATED GROUNDED TYPE BLG. WITH GROUND FLUG.
- (5) EXPOSED CONDUIT RUNS, WHERE INDICATED ON THE DRAWINGS, SHALL BE RUN NEATLY AND SHALL BE PARALLEL TO THE WALLS OF THE BUILDING. RUNS SHALL BE RUN TIGHT UP AGAINST THE WALL.

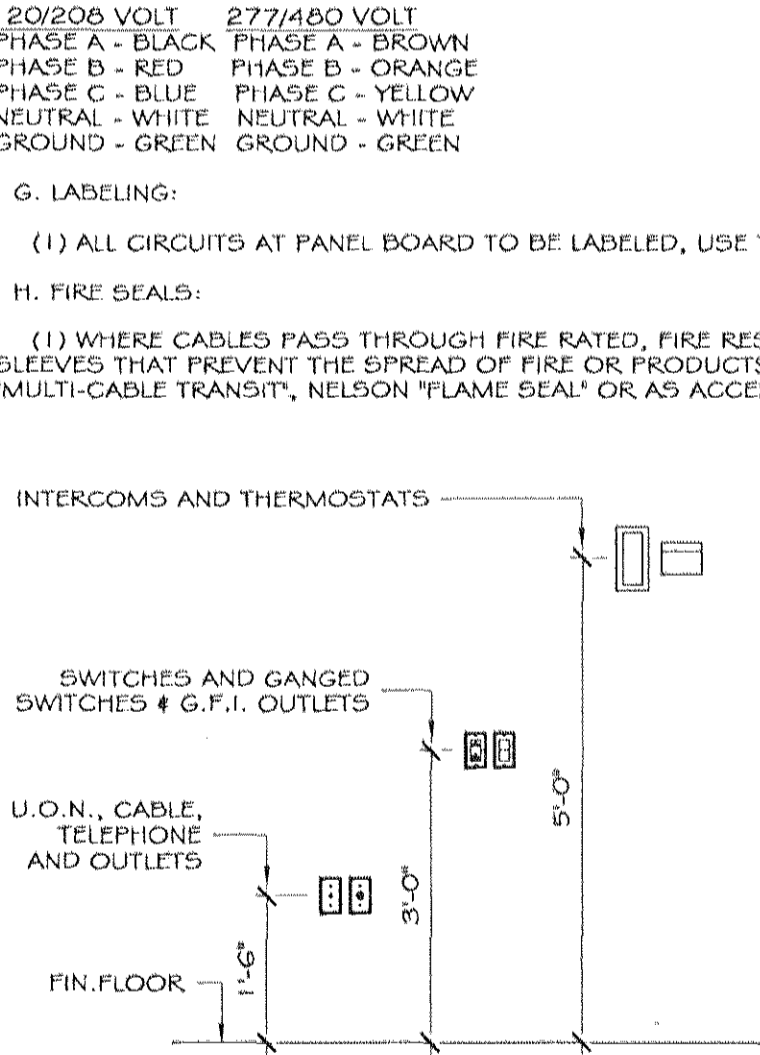
- (6) CONDUITS SHALL BE SECURELY FASTENED IN PLACE WITH STRAPS ON TO KINDORF HANGERS AND SUPPORTS. CONDUIT SUPPORTS SHALL BE AT EVERY 5'-0"
- (7) ALL THREADED JOINTS AT CONDUIT WORK SHALL BE MADE ELECTRICALLY CONDUCTIVE BY A COATING OF THOMAS & BETTS KOPR-SHIELD COMPOUND ON THE MALE THREADED ONLY. WHENEVER THREADS ARE CUT, THEY SHALL ALSO BE COATED WITH KOPR-SHIELD BEFORE MAKING UP THE CONNECTION.
- (8) CONDUIT SHALL BE ROUTED AS CLOSE TO CEILING SLAB AS POSSIBLE.
- C. WIRING DEVICES:
- (1) OUTLET BOXES SHALL BE INSTALLED AT ALL LOCATIONS SHOWN ON THE DRAWINGS. LOCATIONS OF OUTLETS ON THE DRAWINGS ARE APPROXIMATE, AND EXCEPT WHERE DIMENSIONS ARE SHOWN, THE EXACT LOCATION OF OUTLETS SHALL BE TAKEN FROM PLANS AND DETAILS OR AS DIRECTED BY THE ARCHITECT IN THE FIELD.
- (2) OUTLETS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS AND SHALL NOT BE INSTALLED ABOVE DUCTS, BEHIND FURRING OR IN OTHER SIMILAR LOCATIONS.
- (3) CONVENIENCE RECEPTACLES, UNLESS OTHERWISE NOTED, SHALL BE 20 AMP'S, 125 VOLTS, DUPLEX, THREE-WIRE, WITH AUTOMATIC GROUNDING. (MOUNTED AT 18" A.F.F.) UNLESS NOTED OTHERWISE.
- (4) SPECIAL PURPOSE RECEPTACLES SHALL BE OF STYLE AND TYPE AS NOTED ON THE DRAWINGS.
- (5) RECESSED FICTURE BOXES SHALL BE GALVANIZED SHEET STEEL 4" SQUARE, MINIMUM 1-1/2" DEEP WITH A FLAT BLANK COVER MOUNTED TO THE CEILING SUSPENSION SYSTEM. BOXES SHALL BE SUFFICIENT SIZE FOR THE NUMBER OF CONDUCTORS INDICATED.
- (6) SURFACE FICTURE BOXES SHALL BE 4" OCTAGONAL HUNG CEILING BOXES WITH FIXTURES STUD WHERE NECESSARY.
- (7) FLUSH WALL OUTLETS SHALL BE GALVANIZED SHEET STEEL 4" SQUARE, 1-1/2" DEEP WITH SINGLE OR TWO GANG DEVICE (PLASTER) COVER.
- (8) REFER TO EQUIPMENT LAYOUTS FOR EXACT LOCATION OF OUTLETS AND CONNECTION TO ALL EQUIPMENT FURNISHED BY OTHERS. MAKE ALL CONNECTIONS TO FINAL EQUIPMENT LOCATIONS AS DETERMINED IN FIELD. EXACT CONNECTIONS SHALL BE SUITABLE FOR ACTUAL EQUIPMENT. FIELD CHECK.
- (9) HEIGHTS OF OUTLETS AND SWITCHES SHALL BE AS PER PLANS.
- (10) ALL SWITCHES, OUTLETS, TELEPHONE /CATV AND OTHER DEVICES TO BE DECORA STYLE BY LEVITON, WHITE.

D. CABLE AND WIRING WORK:

- (1) SPLICES IN BRANCH CIRCUIT WORK SHALL BE MADE BY MEANS OF TYPE 11 "SCOTCH LOCK" CONNECTORS, OR APPROVED EQUAL.
- (2) ELECTRICAL INSULATING TAPE SHALL BE VINYL PLASTIC TYPE WITH PRESSURE ADHESIVE. "SCOTCH" ELECTRICAL TYPE.
- (3) CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND NO SPLICES OR CONNECTIONS SHALL BE MADE EXCEPT WITHIN OUTLET BOXES.
- (4) A NEUTRAL WIRE MAY CARRY CURRENT UNDER NORMAL OPERATION AND SHALL NOT BE USED AS A GROUND WIRE. THE NEUTRAL WIRE SHALL BE AN INSULATED WIRE AND SHALL BE CONNECTED TO THE GROUND SYSTEM AT ONE PLACE ONLY, AT MAIN SWITCHBOARD. SEE SECTION ON 'GROUNDING AND BONDING' FOR INSTALLATION OF GROUNDING CONDUCTORS.
- (5) NEUTRAL WIRE FOR ALL 20A BRANCH CIRCUITS SERVING RECEPTACLES SHALL BE #10 AWG MINIMUM. UNLESS OTHERWISE NOTED ON DWG.
- E. ELECTRICAL GROUNDING AND BONDING:
- (1) THE NEUTRAL WIRES SHALL NOT BE USED AS GROUNDING CONDUCTORS. THE ELECTRICAL CONTRACTOR SHALL INSTALL A GREEN GROUND WIRE WHERE CALLED FOR ON DRAWINGS OTHERWISE THE METALLIC CONDUIT RUNS SHALL BE PROPERLY INSTALLED AS GROUNDING CONDUCTOR.
- (2) ALL GROUND WIRES AND BONDING JUMPERS SHALL STRANDED COPPER INSTALLED IN A CONDUIT. ALL GROUND WIRES SHALL BE WITHOUT JOINTS AND SPLICES OVER THE ENTIRE LENGTH. IF CONTINUOUS LENGTH IS NOT POSSIBLE DUE TO FIELD CONDITIONS, COMPRESSION FITTING SHALL BE USED FOR THE JOINTS.
- (4) GROUND CONDUITS TO METAL FRAMEWORK OF ELECTRICAL EQUIPMENT WITH DOUBLE LOCK NUTS OR GROUNDING BUSHINGS AND BONDING JUMPERS UNLESS OTHERWISE NOTED.

F. WIRE AND CABLE:

- (1) ALL WIRE AND CABLE SHALL HAVE COPPER CONDUCTORS TYPE THIN-THWN IN CONDUIT WITH 600-VOLT INSULATION. NO WIRE SMALLER THAN #12 AWG SHALL BE USED FOR LIGHTING OR POWER SERVICES. ALL BRANCH CIRCUITS MORE THAN 100 FEET LONG SHALL BE #10 FOR THE ENTIRE LENGTH UP TO THE FIRST OUTLET. ALL CONDUCTORS SHALL BE COPPER UNLESS SHOWN OTHERWISE. ALL CONTROL CONDUCTOR SHALL BE #14 AWG. CONNECTION FOR WIRE #8 AND SMALLER SHALL BE MADE WITH 1/8" PIGGY TIGTAILS ON ACCEPTANCE.
- (2) ALL BRANCH CIRCUIT WIRING SHALL BE CONSISTENTLY COLOR CODED THROUGHOUT THE BUILDING BY MEANS OF COLORING APPLIED TO THE OUTER COVERING TO INDICATE PHASE AND NEUTRAL. THE COLOR CODE SHALL BE AS FOLLOWS:
- 120/208 VOLT 277/480 VOLT
PHASE A - BLACK PHASE A - BROWN
PHASE B - RED PHASE B - ORANGE
PHASE C - BLUE PHASE C - YELLOW
NEUTRAL - WHITE NEUTRAL - WHITE
GROUND - GREEN GROUND - GREEN
- G. LABELING:
- (1) ALL CIRCUITS AT PANEL BOARD TO BE LABELED, USE TAPE LABELING SYSTEM.
- H. FIRE SEALS:
- (1) WHERE CABLES PASS THROUGH FIRE RATED, FIRE RESISTANT AND / OR FIRE STOPPED FLOORS AND WALLS USE CABLE SLEEVES THAT PREVENT THE SPREAD OF FIRE OR PRODUCTS OF COMBUSTION. SLEEVES SHALL BE NELSON ELECTRIC 'MULTI-CABLE TRANSIT, NELSON 'FLAME SEAL' OR AS ACCEPTABLE.

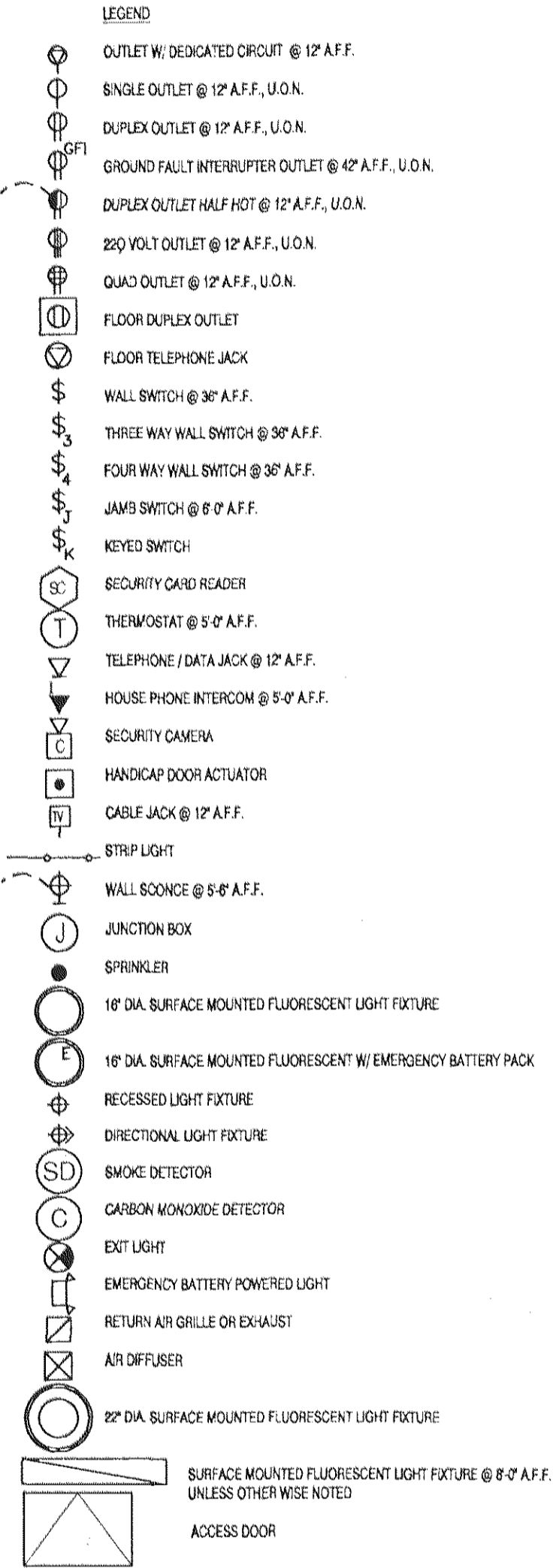


| FIXTURE SCHEDULE | | | | | | |
|------------------|----------|-----------------------------------|---------------------------------|------------------------|-----------------------------------|------------------------------|
| NUMBER | QUANTITY | DESCRIPTION | MODEL NUMBER | COLOR/ FINISH | MANUFACTURER | CONTACT |
| L-1 | V.I.F. | 14-5" DIA. FLUR. EMERGENCY LIGHT | 2050-14-22G-WA-EMB | WHITE | BROWNLEE | WWW.BROWNLEE.COM |
| L-2 | V.I.F. | EXIT LIGHT | #LX-N-U-R-W, WITH WG4 OR XCRITW | WHITE | LIGHTOLIER Genlyte Lighting Group | (212) 432-4500 |
| L-3 | V.I.F. | TERRACE RECESSED WALL SCONCE | #R5F2-A-L5-I-E | BLACK | HADCO LIGHTING | (616) 394-9289 |
| L-4 | V.I.F. | 22" FLUORESCENT W/ (2) 36WATT | LUMIDRUM #5240-W1-239U | WHITE | LIGHTOLIER Genlyte Lighting Group | (212) 432-4500 |
| L-5 | V.I.F. | 10" X 5 1/4" FLUR. 1 LAMP PENDANT | FL4MP1QLS232-120-SO-FC36 | WHITE | LIGHTOLIER Genlyte Lighting Group | (212) 432-4500 |
| L-6 | V.I.F. | 16" DIA. FLUORESCENT | LUMIDRUM #5230-W1-226U | WHITE | LIGHTOLIER Genlyte Lighting Group | (212) 432-4500 |
| L-7 | V.I.F. | EXTERIOR WALL SCONCE | #CK-48-SAP-9-11 | ALUMINUM-SAP-SATIN | B-K LIGHTING | (212) 343-9300 |
| L-8 | V.I.F. | WALL WASHER AT LOBBY | #QCT-900 WITH QCT-2075WH TRIM | WHITE | RSA LIGHTING | (212) 343-9300 |
| L-9 | V.I.F. | DOWN LIGHT IN LOBBY | #QCT-900 WITH QCT-1975WH TRIM | WHITE | RSA LIGHTING | (212) 343-9300 |
| L-10 | V.I.F. | WALL SCONCE POWDER & BATH RM. | #8023ALU + 4916 | POWDER COATED, ACRYLIC | LIGHTOLIER Genlyte Lighting Group | (212) 432-4500 |
| L-11 | V.I.F. | CLOSET DOWN LIGHT | #1002P1 W/ #1021 DIFFUSER | OPAL GLASS | LIGHTOLIER Genlyte Lighting Group | (212) 432-4500 |
| L-12 | V.I.F. | DOWN LIGHT WET LOCATION | #R5V1, 60A19 LAMP W/ R5VT-20 | WHITE | WAC LIGHTING | 516-515-5000 or 800-526-2568 |
| L-13 | V.I.F. | DOWN LIGHT | #R4V1 NON-IC WITH R4VT-22-W1 | WHITE | WAC LIGHTING | 516-515-5000 or 800-526-2568 |
| L-14 | V.I.F. | UNDER CABINET PRO-HALOGEN LAMP | #ULH SERIES-W1 W/JC3-2GW1,-BL | WHITE | JUNO | (212) 941-1334 |
| L-15 | V.I.F. | WALL SCONCE STORE FRONT | T.B.D. | | | |
| L-16 | V.I.F. | EMERGENCY LIGHT | E1-25N-H12-W | WHITE | LIGHTOLIER Genlyte Lighting Group | (212) 432-4500 |
| L-17 | V.I.F. | WALL SCONCE W/ PROTECTIVE CAGE | #3652W1 | WHITE | LIGHTOLIER Genlyte Lighting Group | (212) 432-4500 |

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ELECTRICAL NOTES, AND SCHEDULE

Scale AS NOTED

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Drawn By CCC

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