# GENERAL NOTES

1. DEFINITION: THE WORD "PROVIDE" MEANS FURNISH, INSTALL, FEED, AND CONNECT WITH ALL ACCESSORIES AND ANCILLARY EQUIPMENT FOR A COMPLETE AND OPERABLE INSTALLATION.

2. CODES: ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL ADOPTED APPLICABLE CODES AND ORDINANCES.

3. COMPLETE INSTALLATION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, ACCESSORIES, ETC., NECESSARY TO ACCOMPLISH A COMPLETE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

4. GROUNDING: GROUND ALL EQUIPMENT AND SYSTEM NEUTRAL IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. PROVIDE CODE SIZED EQUIPMENT GROUNDING CONDUCTOR IN ALL FEEDERS AND BRANCH CIRCUIT RACEWAYS. WHERE ISOLATED GROUNDS ARE INDICATED, PROVIDE INSULATED CONDUCTOR.

5. CIRCUITING: ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH DIE CAST SET SCREW FITTINGS MAY BE USED IN DRY, PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM 24". UNAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE TRANSITIONS AND STUB-UPS. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. METAL-CLAD CABLE (TYPE MC) MAY BE USED WHERE ALLOWED BY CODE AND LOCAL AUTHORITIES HAVING JURISDICTION (ALL HOMERUNS SHALL BE IN CONDUIT) AND INSTALLED PER NEC ARTICLE 330. TYPE ENT RACEWAY IS NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHT FIXTURES, MOTORIZED AND VIBRATING EQUIPMENT WITH STEEL FLEX. ALL CONDUIT SHALL HAVE PULL CORD IF OTHER WISE EMPTY.

6. WIRING: WIRE SHALL BE COPPER UNLESS OTHERWISE NOTED, STRANDED IN SIZES #8 AWG AND LARGER. WHERE ALUMINUM IS INDICATED, WIRE SHALL BE COMPACTED-STRAND TYPE WITH JOINT COMPOUND AT TERMINATIONS. INSULATION SHALL BE TYPE THW, THWN OR THHN (XHHW FOR ALUMINUM). ALUMINUM CONDUCTORS SHALL NOT BE USED IN SIZES SMALLER THAN #1/0 (100 A EQUIPMENT FEEDER), AND WHEN USED SHALL BE TERMINATED IN INSULATED COMPRESSION-TYPE CU/AL FITTING (TMAC-ADAPT OR EQUAL).

7. EXISTING CONDITIONS : CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING AND PROPOSED CONDITIONS WHICH MAY AFFECT THE COURSE OF HIS WORK. CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND UNACCEPTABLE CONDITIONS TO ENGINEER PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR FAILURE TO COMPLY WITH THIS REQUIREMENT.

8. PERMITS: OBTAIN AND PAY FOR ALL BUILDING AND WORKING PERMITS AND INSPECTION FEES REQUIRED FOR THIS PROJECT.

9. UTILITY SERVICES: PROVIDE POWER AND COMMUNICATIONS SYSTEM SERVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE SERVING UTILITIES. PROVIDE EXCAVATION, RACEWAY, STRUCTURES, GROUNDING, ETC. AS DIRECTED. POWER SERVICES AND DISTRIBUTION SYSTEM A.I.C. RATING SHALL EXCEED MAXIMUM AVAILABLE FAULT CURRENT THROUGH UTILITY SERVICE TRANSFORMER. CONTACT SERVING UTILITIES AND OBTAIN THEIR REQUIREMENTS PRIOR TO BID. (UTILITY SERVICE AND LINE EXTENSION CHARGES PAID BY OTHERS).

10. TEMPORARY CONSTRUCTION POWER: PROVIDE TEMPORARY ELECTRICAL POWER DISTRIBUTION AND LIGHTING AS REQUIRED FOR ALL TRADES THAT REQUIRE SERVICE DURING THE COURSE OF THIS PROJECT IN COMPLIANCE WITH ALL NEC AND OSHA REQUIREMENTS. (ENERGY COSTS BY OTHERS.)

11. FIRE STOPPING: ALL PENETRATED FIRE RATED SURFACES SHALL BE FIRE SEALED WITH APPROVED U.L. LISTED SEALANTS AS LISTED WITHIN ARCHITECTURAL SPECIFICATIONS. DO NOT EXCEED MAXIMUM ALLOWABLE SURFACE PENETRATIONS DEPENDENT ON RATING OF SURFACES. REFER TO ARCHITECTURAL DRAWINGS FOR DETERMINATION OF PENETRATION LOCATIONS THROUGH FIRE RATED ASSEMBLIES.

12. FUSES AND CIRCUIT BREAKERS: FUSES AND CIRCUIT BREAKERS SHALL BE SIZED PER ACTUAL RESPECTIVE APPLICATION (I.E. MOTOR CIRCUIT PROTECTOR, GROUND FAULT CIRCUIT INTERRUPTER, ARC FAULT CIRCUIT INTERRUPTER, ETC.). FUSES SHALL BE DUAL ELEMENT, CURRENT-LIMITING, AND SHALL BE INTERCHANGEABLE BETWEEN FRAME SIZES WITH STANDARD FACTORY FUSE REDUCERS. PROVIDE LOCKABLE SPARE FUSE CABINET WITH THREE (3) SPARE FUSES OF EACH SIZE USED.

13. EQUIPMENT STANDARDS: ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). LIGHTING FIXTURES SHALL HAVE ELECTRONIC BALLASTS AND ACRYLIC LENSES. SERVICE EQUIPMENT SHALL BE FACTORY ASSEMBLED, COMMERCIAL GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. PANELBOARDS SHALL HAVE BOLT-ON CIRCUIT BREAKERS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, IVORY UNLESS OTHERWISE NOTED. RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.

14. GUARANTEE: THE COMPLETE ELECTRICAL SYSTEM, AND ALL PORTIONS THERE OF, SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. PROMPTLY REMEDY SUCH DEFECTS AND ANY SUBSEQUENT DAMAGE CAUSED BY THE DEFECTS OR REPAIR THEREOF AT NO EXPENSE TO THE OWNER. LIGHT BULBS ARE EXEMPT FROM THIS GUARANTEE, BUT SHALL BE NEW AND UNUSED AT TIME OF FINAL ACCEPTANCE.

15. SUBMITTALS: SUBMIT EIGHT COPIES OF FACTORY SHOP DRAWINGS FOR ALL LIGHTING FIXTURES, SWITCHGEAR, PANELS, MOTOR CONTROLS, WIRING DEVICES, ETC. PROPOSED FOR THIS PROJECT. PROPOSED SUBSTITUTIONS SHALL BE EQUAL OR SUPERIOR TO SPECIFIED ITEMS IN ALL RESPECTS. DETERMINATION OF EQUALITY RESTS SOLELY WITH ENGINEER.

16. LOCATIONS: INDICATED LOCATIONS OF ALL OUTLETS AND EQUIPMENT ARE SUBJECT TO CHANGE. SHIFT/RELOCATE/RECONFIGURE ANY OUTLET, EQUIPMENT OR CONNECTION POINT UP TO 10' AS DIRECTED BY ENGINEER AT NO ADDED COST.

17. IDENTIFICATION: IDENTIFY ALL EQUIPMENT, SWITCHBOARD CIRCUITS AND ELECTRICALLY CONNECTED EQUIPMENT WITH ENGRAVED NAMEPLATES. NAMEPLATES SHALL BE FASTENED WITH A MINIMUM OF TWO (2) SCREWS. PANEL DIRECTORIES SHALL BE TYPED.

18. PANELBOARDS: PANELS SHALL HAVE FLUSH MONO-FLAT TRIM, PIANO HINGED DOORS AND COVER (DOOR-IN-DOOR) WITH LOCKABLE MASTER-KEYED FLUSH CATCHES AND BOLT-ON CIRCUIT BREAKERS. FLUSH-MOUNTED PANELS SHALL HAVE EMPTY CONDUITS STUBBED TO ACCESSIBLE ATTIC SPACE: (1) 1" CONDUIT FOR EACH (4) SPARE/SPACE CIRCUITS.

19. TAMPERPROOF: ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE DEMONSTRATED TO BE TAMPERPROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PAD LOCKABLE.

20. SUPPORTS AND HANGERS: SUPPORT AND ALIGN ALL RACEWAYS, CABINETS, BOXES, BACK BOXES, FIXTURES, AND EQUIPMENT FROM STRUCTURE. SECURE ALL SUPPORTING METHODS BY MEANS OF TOGGLE BOLTS IN HOLLOW MASONRY, EXPANSION BOLTS IN SOLID MASONRY, CONCRETE PRESET INSERTS OR EXPANSION BOLTS IN CONCRETE, MACHINE SCREWS OR BOLTS IN METAL, AND WOOD SCREWS IN WOOD CONSTRUCTION. ALL SUPPORTING SYSTEMS AND COMPONENTS SHALL BE RATED FOR FIVE (5) TIMES THE ACTUAL LOAD.

21. ELECTRIC ROOM CODE COMPLIANCE: DUE TO THE DIAGRAMMATIC NATURE OF THE DESIGN DOCUMENTS (ELECTRICAL, MECHANICAL, PLUMBING, FIRE SPRINKLER, ETC.), IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH ALL OTHER SUBCONTRACTORS AT THE START OF THIS PROJECT TO INFORM AND VERIFY THAT NO FOREIGN SYSTEMS OR EQUIPMENT PASS THROUGH THE DESIGNATED ELECTRIC ROOMS AND THAT A MINIMUM OF 7'-0" IS PROVIDED AS CLEAR HEADROOM ALONG ACCESS PATHS TO ALL ELECTRIC ROOMS. ANY REROUTING OR RELOCATION OF SYSTEMS THAT A SUBCONTRACT OR FEELS WILL COMPROMISE THE INITIAL DESIGN INTENT SHALL BE DESCRIBED IN WRITING AND FORWARDED TO THE DESIGN ENGINEERS FOR FURTHER REVIEW. ALL PIPING TO HVAC UNITS THAT COOL ELECTRIC ROOMS SHALL BE LOCATED ABOVE THE ENTRY DOORS WHEN EVER POSSIBLE. THE SPRINKLER PIPING TO PROVIDE PROTECTION FOR THE ELECTRIC ROOM IS PREFERRED TO ENTER THE ROOM ABOVE THE ENTRY DOOR AND RUN DOWN THE AISLE SPACES OF THE ROOM. ALL INSTALLATIONS SHALL BE FULLY COORDINATED AMONG ALL TRADES.

22. ELECTRICALLY-OPERATED EQUIPMENT-FEEDERS AND OVERCURRENT DEVICES COORDINATION: FEEDERS AND OVERCURRENT DEVICES (INCLUDING STARTERS, DISCONNECTS, ETC.) HAVE BEEN DESIGNED BASED ON INFORMATION PROVIDED BY THE RESPONSIBLE CONSULTANT AND/OR DESIGNATED SUPPLIER. PRIOR TO ROUGH-IN, COORDINATE WITH THE APPROPRIATE TRADE AND/OR INSTALLER TO DETERMINE THAT THE ACTUAL NAMEPLATE ELECTRICAL REQUIREMENTS MATCH THIS DESIGN. ALL COST REDUCTION, VALUE ENGINEERING, SUBSTITUTION PROPOSALS, ETC. CONCERNING ELECTRICALLY POWERED EQUIPMENT AND SYSTEMS WHICH IMPACT THE ELECTRICAL SYSTEMS OF THIS PROJECT SHALL INCLUDE ALL ELECTRICAL COSTS AND/OR CREDITS ASSOCIATED WITH SUCH PROPOSALS AND SHALL BE COORDINATED AMONGST THE GENERAL CONTRACTOR AND THE SEVERAL AFFECTED TRADES PRIOR TO SUBMISSION FOR REVIEW.

23. COORDINATION: THIS PROJECT REQUIRES A HIGH LEVEL OF COORDINATION AND COOPERATION WITH OWNER, ARCHITECT, OTHER TRADES, VENDORS, AND SPECIALTY CONTRACTORS. THIS CONTRACTOR SHALL OBTAIN AND STUDY SHOP DRAWINGS OF ALL ELECTRICALLY CONNECTED EQUIPMENT AND SHALL ADJUST POINTS OF CONNECTION, LOCATIONS, AND MOUNTING HEIGHTS AS NECESSARY PRIOR TO ROUGH-IN.

24. BIDDING: THE CIVIL, ARCHITECTURAL, MECHANICAL, KITCHEN AND INTERIOR DRAWINGS CONTAIN DETAIL DESCRIPTIONS, CIRCUITING AND CONNECTION REQUIREMENTS WHICH ARE PART OF DIVISION 16 RESPONSIBILITIES. THIS CONTRACTOR SHALL NOT SUBMIT BIDS ON THIS PROJECT BEFORE REVIEWING ALL PROJECT DRAWINGS, SPECIFICATIONS, AND ADDENDA.

25. FIRE ALARM: THE CONTRACTOR SHALL PROVIDE A COMPLETE FIRE ALARM SYSTEM IN FULL ACCORDANCE WITH LOCAL, STATE AND ADA REQUIREMENTS. THESE DOCUMENTS DO NOT INDICATE DEVICES, OUTLETS, CONNECTIONS, AND CIRCUITRY NECESSARY FOR A COMPLETE FIRE ALARM SYSTEM. OBTAIN FIRE MARSHAL APPROVED SHOP DRAWINGS PRIOR TO COMMENCEMENT OF ROUGH-IN. PROVIDE COMPLETE SYSTEM TESTING UPON COMPLETION OF INSTALLATION AND PRIOR TO FIELD ACCEPTANCE BY OWNER.

26. ADDITIONAL SYSTEMS AND EQUIPMENT CONNECTIONS: IN ADDITION TO EQUIPMENT POWER FEEDERS AND CONNECTIONS INDICATED ON THE ELECTRICAL DRAWINGS, PROVIDE 120V CONTROL POWER CONNECTIONS TO SMOKE/FIRE DAMPERS, VAV BOXES, TEMPERATURE CONTROL AND FIRE ALARM PANELS, DOOR HOLDING/LATCHING DEVICES, ETC. AS INDICATED IN THE PROJECT DRAWINGS AND SPECIFICATIONS AS WELL AS ALL DESIGN-BUILD SYSTEM DRAWINGS.

| ITEM | POWER SOURCE | NO. PER 20A CIRCUIT | PROVIDES SMOKE DETECTORS |
|---|---|---|---|
| FIRE/SMOKE DAMPER | EMERGENCY | 10 | YES |
| VAV TERMINAL (NO FAN) | NORMAL (VERIFY) | 10 | NO |
| TEMPERATURE CONTROL PANEL | EMERGENCY (VERIFY) | 1 | NO |
| FIRE ALARM PANEL | EMERGENCY | 1 | NO |
| DOOR HOLDING/LATCHING DEVICES | EMERGENCY | 10 | NO |

27. COMMUNICATION SYSTEMS: THE ELECTRICAL CONTRACTOR SHALL PROVIDE OUTLETS AND RACEWAYS FOR COMMUNICATION SYSTEMS AS INDICATED HERE IN, INCLUDING TELEPHONE, DATA AND POINT-OF-SALE. CABLING AND DEVICES SHALL BE INSTALLED AND TERMINATED BY OTHERS. OTHER COMMUNICATION SYSTEMS (I.E., SOUND, SECURITY, AUDIO/VISUAL, CCTV, MATV, ETC.) SHALL BE DESIGNED AND INSTALLED BY OTHERS.

28. ALL DEVICES INSTALLED WITHIN PATIENT CARE AREAS SHALL COMPLY WITH NEC ARTICLE 517. PATIENT CARE AREAS ARE TO INCLUDE DONOR FLOOR, EAM ROOMS, SCREENING ROOMS, ETC.

# ELECTRICAL SYMBOL LIST

NOTE: THIS IS A MASTER SCHEDULE. NOT ALL SYMBOLS AND/OR ABBREVIATIONS CONTAINED HEREIN MAY APPEAR ON THE DRAWINGS.

- FLUORESCENT FIXTURE - RECESSED, LAY-IN
- FLUORESCENT FIXTURE - RECESSED, FLANGED
- FLUORESCENT FIXTURE - SURFACE
- FLUORESCENT FIXTURE - SUSPENDED
- FLUORESCENT FIXTURE - OPEN STRIP WITH WIRE GUARD
- FLUORESCENT FIXTURE - WALL MOUNTED
- INCANDESCENT, H.I.D. OR MINI-FLUORESCENT - SURFACE OR RECESSED, PER FIXTURE SCHEDULE
- INCANDESCENT, H.I.D. OR MINI-FLUORESCENT - WALL BRACKET
- INCANDESCENT, H.I.D. OR MINI-FLUORESCENT - WALL WASH
- LOW VOLTAGE INCANDESCENT FIXTURE
- CHANDELIER (PROVIDE 5X STRUCTURAL BACKING)
- FAN (PROVIDE 5X STRUCTURAL BACKING)
- SPOTLIGHT - J-BOX OR TRACK MOUNTED - TRACK LENGTH AS INDICATED
- STEP LIGHT - SURFACE OR RECESSED, PER FIXTURE SCHEDULE
- BOLLARD
- POLE OR POST - ARM OR TOP MOUNTED CUT-OFF LUMINAIRE
- TWIN-LAMP BATTERY PACK - UNSWITCHED, WALL MOUNTED (LOCATE 12" BELOW CEILING U.O.N.)
- TWIN-LAMP BATTERY PACK - UNSWITCHED, CEILING MOUNTED, FLUSH OR SURFACE PER FIXTURE SCHEDULE
- EXIT LIGHT - FACES AND ARROWS AS INDICATED, UNIVERSAL MOUNTING, UNSWITCHED
- EXIT LIGHT - COMBINATION SINGLE FACE, ARROWS AS INDICATED WITH TWIN LAMP BATTERY PACK, UNIVERSAL MOUNTING, UNSWITCHED.
- EXIT LIGHT - LOW LEVEL: 6" - 8" AFF. TO BOTTOM, 4" MAX. OFF DOOR FRAME
- LV — LOW VOLTAGE — LED — LED
- N — NEON
- $S^{X}$ ETC. — FIXTURE, EQUIPMENT ON EMERGENCY
- $S^{X}$ $S^{2}$ — SWITCHES AT +48" TO TOP UON (PER ADA)
- $S$ — SWITCH - SINGLE POLE
- $S^{2}$ — SWITCH - DOUBLE POLE
- $S^{3}$ — SWITCH - THREE WAY
- $S^{4}$ — SWITCH - FOUR WAY
- M — SWITCH - OCCUPANCY TYPE
- [M] — SWITCH - OCCUPANCY TYPE, CEILING MOUNTED
- $S^{X}$ — SWITCH - EMERGENCY
- $S^{P}$ — SWITCH - PILOT TOGGLE (CONFIRM LIGHTED POSITION)
- $S^{K}$ — SWITCH - KEYED OPERATED
- D — SWITCH - SLIDER TYPE ELECTRONIC DIMMER (WATTAGE RATING AS REQUIRED)
- $S^{MC}$ — SWITCH - MOMENTARY CONTACT: SPDT CENTER OFF UON
- $S^{M}$ — MANUAL MOTOR STARTER - POLES AND HEATERS AS REQUIRED
- PE — PHOTOELECTRIC SWITCH - 1500 VA UON
- SIGN — SIGNAGE OUTLET CONNECTION
- DEVICES AT 18" TO CENTER LINE UON (PER ADA)
- ETC. — DEVICES MOUNTED IN MULTIPLE UNDER COMMON COVER MAXIMUM HEIGHT ON WALLS + 48" TO TOP UON (PER ADA)
- DEVICES MOUNTED IN OR ABOVE BACKSPLASH; MAXIMUM HEIGHT ON WALLS + 48" TO TOP UON (PER ADA)
- DEVICES IN MULTI-COMPARTMENT FLUSH FLOOR MOUNTED UON
- RECEPTACLE - DUPLEX
- RECEPTACLE - DUPLEX - HALF SWITCHED (TOP HALF)
- RECEPTACLE - DUPLEX - INTEGRAL GFCI CIRCUITRY
- RECEPTACLE - DUPLEX - ISOLATED GROUND (ORANGE FACE). NEMA 5262/IG
- RECEPTACLE - DOUBLE DUPLEX
- RECEPTACLE - DOUBLE DUPLEX - INTEGRAL GFCI CIRCUITRY
- RECEPTACLE - SPECIAL TYPE (SEE ADDITIONAL NOTES)
- RECEPTACLE(S) - CEILING MOUNTED
- FLUG MOLD SURFACE RACEWAY SYSTEM (2-CIRCUIT WITH OUTLETS 18" O.C. U.O.N.) MOUNTED ABOVE BACKSPLASH U.O.N.
- TP — TELEPOWER POLE
- SMOKE DETECTOR - LOCAL ONLY, 120V, W/INTEGRAL BATTERY AND ALARM HORN. WALL MOUNT AT 12" BELOW CEILING
- SMOKE DETECTOR - LOCAL ONLY, 120V, W/INTEGRAL BATTERY, STROBE, AND ALARM HORN. WALL MOUNT AT 12" BELOW CEILING
- OUTLET - CLOCK
- OUTLET - TELEPHONE
- OUTLET - VOICE / DATA
- OUTLET - DATA
- OUTLET - TELEVISION
- OUTLET - DOOR BELL/BUZZER
- OUTLET - MICROPHONE
- OUTLET - VOLUME CONTROL (+48" TO TOP UON)
- OUTLET - SPEAKER 8" COAXIAL W/ BACK BOX AND GRILLE
- OUTLET - THERMOSTAT (REF. MECHANICAL DRAWINGS)
- TV / SECURITY CAMERA - FIXED (MOUNTING PER PLANS)
- TV / SECURITY CAMERA - PTZ - PAN, TILT, ZOOM (MOUNTING PER PLANS)

- SWITCHGEAR
- PANELBOARD - SURFACE MOUNTED
- PANELBOARD - FLUSH MOUNTED
- EXISTING / RELOCATED PANELBOARD - SURFACE MOUNTED
- EXISTING / RELOCATED PANELBOARD - FLUSH MOUNTED
- TRANSFORMER
- ENCLOSED CIRCUIT BREAKER
- FIRE ALARM EQUIPMENT
- FSD — COMBINATION FIRE/SMOKE DAMPER
- SD — SMOKE DAMPER
- SHUNT TRIP STATION
- CONTROL STATION AT +48" TO TOP UON (PER ADA)
- RELAY
- CONTACTOR WITH INTEGRAL HOA SELECTOR
- MAGNETIC STARTER, SIZE 1 UON
- F N — DISCONNECT SWITCH: 30/3 UON (F=FUSIBLE (PPEN), N=NONFUSED)
- COMBINATION STARTER & DISCONNECT: SIZE 1 UON
- VFD — VARIABLE FREQUENCY DRIVE
- SINGLE-PHASE MOTOR CONTROL ASSEMBLY; HP-RATED SWITCH AND POWER RELAY-120/1 (U.O.N.)
- FULLBOX - SIZE AND LOCATION AS REQUIRED
- JUNCTION BOX - SIZE PER NEC REQUIREMENTS
- AC 1 — MECHANICAL EQUIPMENT DESIGNATION
- M — MOTOR OUTLET
- F1 DIM 3 — LIGHTING FIXTURE DESIGNATION: TYPE F1, 120 WATTS QUANTITY = 3
- LOAD C: ___KVA ( ___A) — C = CONNECTED LOAD
- LOAD D: ___KVA ( ___A) — D = DEMAND LOAD
- LOAD S: ___KVA ( ___A) — S = STANDBY LOAD
- EQUIPMENT LOAD SUMMARY (EXPRESSED IN KVA AND AMPS)
- 1 — SHEET NOTE DESIGNATION
- 42 — FEEDER DESIGNATION (SEE FEEDER SCHEDULE)
- CIRCUITING IN WALL OR ABOVE CEILING
- CIRCUITING IN FLOOR OR BELOW GRADE
- TICS = NO. OF #12 WIRES IF MORE THAN TWO; = ISOLATED GROUND WIRE
- A-13.3 — HOMERUN: (4) #12, 3/4"C. TO PANEL A - CIR. 13.3
- STUB-OUT
- CIRCUIT DOWN
- COPPER GROUND (SIZE PER PLANS)
- CIRCUIT UP
- 50 — MOISTURE SEAL-OFF

| | |
|---|---|
| 30/3 | 30 AMP / 3 POLE (REPRESENTATIVE) |
| AL | ALUMINUM |
| AFF | ABOVE FINISHED FLOOR |
| AFG | ABOVE FINISHED GRADE |
| AIC | AMP INTERRUPTING CURRENT |
| ATS | AUTOMATIC TRANSFER SWITCH |
| BKBD | BACKBOARD |
| C | CONDUIT (WITH FULL CORD IF OTHERWISE EMPTY) |
| CU | COPPER |
| (E) | EXISTING TO REMAIN |
| F | FUSE (DUAL-ELEMENT, TIME DELAY) |
| FBO | FURNISHED BY OTHERS |
| FPEN | FUSE PER EQUIPMENT NAMEPLATE |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GND | GROUND |
| HOA | HAND-OFF-AUTOMATIC |
| HP | HORSEPOWER |
| IG | ISOLATED GROUND |
| K | KCMIL (300 KCMIL = 300K) |
| NF | NON-FUSED |
| NIC | NOT IN CONTRACT |
| NL | NIGHT LIGHT |
| NTS | NOT TO SCALE |
| (R) | EXISTING TO BE RELOCATED |
| RGS | RIGID GALVANIZED STEEL |
| TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSION |
| UNSW | UNSWITCHED |
| UPS | UNINTERRUPTIBLE POWER SUPPLY |
| UON | UNLESS OTHERWISE NOTED |
| WP | WEATHER PROOF (NEMA 3R) |
| (X) | EXISTING TO BE REMOVED |
| XFMR | TRANSFORMER |

# DESIGN BUILD FIRE ALARM SYSTEM NOTES

IN ADDITION TO SPECIFICATIONS NOTE #28, THE FOLLOWING ITEMS SHALL BE INSTALLED OR RELOCATED COMPLETE:

1. ALL MONITORING, DEVICES, WIRING, TESTING, ETC., FOR ALL DUCT DETECTORS.
2. LIFE SAFETY DEVICES SUCH AS FIRE ALARM PULL STATIONS, HORN STROBES, ETC.
3. ALL DETECTOR POWER SHALL BE HARDWIRED INTO HOUSE PANEL.
4. ALL DETECTOR MONITORING SHALL BE ON HOUSE MONITORING PANEL.
5. DETECTORS SHALL BE "SMOKE" TESTED FOR BUILDING INSPECTIONS PER LOCAL JURISDICTION HAVING AUTHORITY OR HVAC UNITS SHALL BE HOT WIRED FOR DETECTOR INSPECTIONS. INCLUDE ALL ASSOCIATED COSTS.
6. INCLUDE ALL CONDUIT, WIRE, CONNECTIONS, ETC., TO FIRE RISER ALARM PANEL.
7. WHERE APPLICABLE, INCLUDE ALL CONDUIT, WIRE, CONNECTIONS, ETC., TO 'PIV' VALVES. COORDINATE WITH SITE UTILITIES CONTRACTOR FOR COMPLETE SCOPE OF THIS WORK.
8. WHERE APPLICABLE, INCLUDE ALL CONDUIT, WIRE, CONNECTIONS, ETC., TO 'DCDA' ALARM POINTS. COORDINATE WITH SITE UTILITIES CONTRACTOR FOR COMPLETE SCOPE OF THIS WORK.
9. CONTRACTOR MUST TAKE ALL PRECAUTIONS TO PROTECT SPRAYED ON FIREPROOFING. FURTHERMORE, CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF THE SAME IF DAMAGED OR REMOVED DURING CONSTRUCTION.
10. THERE SHALL NOT BE ANY CONNECTION TO THE DEPARTMENT OF AVIATION EMCS/LIFE SAFETY OR SPRINKLER SYSTEMS WITHOUT PRIOR WRITTEN APPROVAL FROM AN AUTHORIZED DOA REPRESENTATIVE.

# DRAWING INDEX




MSA #L16029

MSA ENGINEERING CONSULTANTS
370 E. Windmill Lane, Suite 100
Las Vegas, NV. 89123
T: (702) 896-1100
msa-lv.com



ACKAL A PROFESSIONAL CORPORATION
ARCHITECTS
105 CHAPEL DRIVE - LAFAYETTE, LOUISIANA 70506
337-988-5271ph. - 337-988-5272fax
www.ackalarchitects.com


INTERIOR TENANT IMPROVEMENT FOR:
IMMUNOTEK BIO CENTERS, LLC
4550 LAKE WORTH ROAD
OFFICE DEPOT PLAZA, SUITE B-5
LAKE WORTH, PALM BEACH COUNTY, FL 33463

DAVID J. MELOY III — LICENSE NO. 76265 — STATE OF FLORIDA — PROFESSIONAL ENGINEER

AUG. 02, 2016



proj. no. 16-002
date: 08-02-2016
project architect: B.A.
project manager: A.D.
drawn by: MSA
file name: LAKEWORTH
revised:
plot scale: AS NOTED
sheet name: SYMBOL LIST AND GENERAL NOTES
sheet no. E0.0