

ELECTRICAL SPECIFICATIONS

PART 1: GENERAL

A. PROVIDE ALL WORK AND MATERIALS FOR THE INSTALLATION OF COMPLETE WIRING SYSTEMS AS SPECIFIED HEREIN AND INDICATED ON THE DRAWINGS.

B. ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR.

C. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE THE DAY THE PROJECT IS ACCEPTED BY THE OWNER.

D. WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, OSHA STATE BUILDING CODE AND ALL OTHER APPLICABLE LOCAL REQUIREMENTS. ALL WORK SHALL COMPLY WITH THE LATEST ADDITION OF NECA STANDARDS OF INSTALLATION.

E. ALL MATERIALS, DEVICES, AND APPLIANCES SHALL BE NEW, EXCEPT WHERE OTHERWISE NOTED, AND SHALL BE LISTED BY AN APPROVED TESTING AGENCY WHERE SUCH A LISTING IS AVAILABLE. FACTORY ASSEMBLED EQUIPMENT SHALL BE LISTED AND LABELED AS AN ASSEMBLY. ANY EQUIPMENT NOT LISTED SHALL HAVE PRIOR APPROVAL FROM THE LOCAL AUTHORITY HAVING JURISDICTION. ALL MATERIALS SHALL COMPLY WITH APPLICABLE ANSI, IEEE AND NEMA STANDARDS.

F. PROVIDE ALL CUTTING, PATCHING, CHANGING AND CHASING FOR INSTALLATION OF WORK AND REPAIR ANY DAMAGE OF EXISTING OR NEW INSTALLATIONS AT THE CONTRACTORS EXPENSE.

G. SHOP DRAWINGS AND CATALOG DATA SHALL BE SUBMITTED FOR APPROVAL PRIOR TO BEGINNING WORK. SUBMIT FOUR COPIES OF SHOP DRAWINGS FOR LIGHTING FIXTURES, LAMPS, BALLASTS AND PANELBOARDS. SUBMIT FOUR COPIES OF CATALOG DATA FOR DISCONNECT SWITCHES AND WIRING DEVICES.

H. PROVIDE ENGRAVED IDENTIFICATION LABELS FOR PANELBOARDS, WIRING TROUGHS, AND FUSED SWITCHES, WHITE LETTERS ON BLACK FOR 120/208VOLT SYSTEMS, BLACK LETTERS ON WHITE FOR 277/480VOLT SYSTEMS. LABEL ALL BREAKERS INSIDE THE PANEL NEXT TO THE BREAKER USING THE NUMBER SCHEME INDICATED ON THE DRAWINGS.

I. AN ELECTRICAL INSPECTION CERTIFICATE SHALL BE ISSUED BY THE LOCAL INSPECTION AUTHORITIES BEFORE APPROVAL FOR FINAL PAYMENT.

J. THE CONDUIT AND NEUTRAL SYSTEM SHALL BE GROUNDED AT THE MAIN SERVICE EQUIPMENT. GROUNDING ELECTRODE SYSTEM SHALL BE INSTALLED PER N.E.C. ARTICLE 250 AND AS INDICATED ON THE DRAWINGS.

K. WIRING SHALL BE TESTED FOR CONTINUITY AND GROUNDS BEFORE BEING ENERGIZED. FAULTY WIRING SHALL BE REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.

L. IF, DURING THE COURSE OF WORK, THE ELECTRICAL CONTRACTOR DISCOVERS A PROBLEM WITH THE PERFORMANCE OF THE INSTALLATION RELATIVE TO THE PLANS AND SPECIFICATIONS OR NEC OR OTHER CODES, THE CONTRACTOR SHALL IMMEDIATELY BRING THE PROBLEM TO THE ATTENTION OF THE ARCHITECT OR ENGINEER FOR RESOLUTION PRIOR TO THE EXECUTION OF THE WORK.

M. THE ELECTRICAL CONTRACTOR SHALL CONNECT ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS, UNLESS OTHERWISE NOTED, EXCEPT FOR CONTROL WIRING FOR EQUIPMENT NOT PROVIDED BY THE ELECTRICAL CONTRACTOR. CONTROL WIRING FOR SUCH EQUIPMENT SHALL BE PROVIDED BY THE RESPECTIVE DISCIPLINE.

N. COORDINATE LOCATION AND REQUIREMENTS FOR ELECTRICAL SERVICE WITH THE POWER COMPANY, WHERE MORE THAN ONE SERVICE IS SUPPLIED TO A BUILDING, PROVIDE IDENTIFICATION AT EACH SERVICE PER NEC 200(B) AND AS INDICATED ON THE DRAWINGS.

O. COORDINATE LOCATION AND REQUIREMENTS FOR TELEPHONE SERVICE WITH THE TELEPHONE COMPANY AND AS INDICATED ON THE DRAWINGS.

P. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PROVIDING TEMPORARY POWER.

PART 2: RACEWAY

A. CONDUIT SHALL BE ZINC-COATED EMT INDOORS. EMT FITTINGS SHALL BE STEEL SCREW. MINIMUM SIZE SHALL BE 1/2", UNLESS OTHERWISE NOTED. USE SCHEDULE 40 PVC OUTDOORS ABOVE 8'-0" OR BELOW GRADE. USE MC WHERE REQUIRED BY CODE OR EXPOSED BELOW 8'-0".

B. SUPPORT ALL CONDUITS WITH STRAPS AND CLAMPS. RUN ALL CONDUIT PARALLEL OR PERPENDICULAR TO BUILDING WALLS.

C. JUNCTION AND PULL BOXES SHALL BE CODE GAUGE GALVANIZED SHEET METAL.

D. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED FOR CONNECTIONS, BUT NOT AS A WIRING METHOD OTHERWISE.

E. MC CABLE MAY BE USED AS A WIRING METHOD WHERE ALLOWED BY CODE.

F. RACEWAY PENETRATIONS THROUGH FLOOR SLABS AND FIRE-RATED WALLS SHALL BE FILLED WITH IMPERVIOUS, NON-SHRINK GROUT SUFFICIENTLY TIGHT TO PREVENT THE TRANSFER OF SMOKE, WATER, AND DUST. ROOF PENETRATIONS SHALL BE WITHIN THE EQUIPMENT CURB WHERE POSSIBLE.

G. CONDUIT INSTALLED UNDERGROUND OR IN CONCRETE SHALL HAVE JOINTS MADE WATER-TIGHT BY USE OF POLYURETHANE GROUT OR EPOXY RESIN TAPE. APPROVED SALS SHALL BE PROVIDED IN HAZARDOUS LOCATIONS AS REQUIRED BY THE N.E.C.

PART 3: CONDUCTORS

A. ALL CONDUCTORS SHALL BE SINGLE CONDUCTOR COPPER, THIN WALL, SOLID FOR SIZES #14 THROUGH #10, THIN WALL STRANDED FOR SIZES #8 AND LARGER.

B. BRANCH CIRCUITS SHALL NOT BE SMALLER THAN #12 AWG. CONTROL WIRING MAY BE #14 AWG.

C. CONDUCTORS SHALL BE COLOR CODED BLACK/RED/BLUE FOR 120/208VOLT SYSTEMS AND BROWN/ORANGE/YELLOW FOR 277/480VOLT SYSTEMS FOR A, B, AND C PHASES, RESPECTIVELY.

D. WIRING TO LIGHTING FIXTURES SHALL BE AS REQUIRED BY UL LABEL.

E. ALL BRANCH CIRCUIT CONDUITS OR CABLE ASSEMBLIES SHALL CONTAIN AN INSULATED GREEN GROUNDING CONDUCTOR SIZED PER NEC 250-122.

F. ALL CONDUCTORS INSTALLED IN VERTICAL RACEWAYS SHALL BE SUPPORTED AT INTERVALS AS REQUIRED PER NEC ARTICLE 300-19.

G. ALL EQUIPMENT AND DEVICE TERMINATIONS SHALL BE UL LISTED FOR USE WITH 75°C INSULATED CONDUCTORS AT THEIR 75°C AMPCACITY.

H. EITHER PROVIDE A SEPARATE NEUTRAL FOR EACH PHASE CONDUCTOR IN ALL BRANCH CIRCUITS OR 20A-1P BREAKER WITH HANDLE TIE FOR 20A CIRCUITS THAT SHARE COMMON NEUTRAL.

PART 4: WIRING DEVICES

A. WIRING DEVICES SHALL BE COLOR SELECTED BY ARCHITECT/TOWNER WITH STAINLESS STEEL COVER PLATES. SPECIFICATION GRADE AS INDICATED BELOW, EQUAL TO THE COOPER QUALITY IDENTIFIER.

TOGGLE SWITCHES SHALL BE AS FOLLOWS:

SINGLE POLE 20 AMP	COOPER 1221
THREE WAY 20 AMP	COOPER 1223
FOUR WAY 20 AMP	COOPER 1224

DUPLEX RECEPTACLES SHALL HAVE A NEMO FACE AND SHALL BE AS FOLLOWS:

15 AMP DUPLEX	COOPER S252
20 AMP DUPLEX	COOPER S302
15 AMP DUPLEX-GFCI	COOPER GF5252
20 AMP DUPLEX-GFCI	COOPER GF5352

B. DUPLEX RECEPTACLES ON DEDICATED CIRCUIT SHALL BE 20 AMP. OTHER DUPLEX RECEPTACLES MAY BE 15 AMP, UNLESS OTHERWISE NOTED.

C. OUTLET BOXES SHALL NOT BE MOUNTED BACK-TO-BACK.

D. A MAXIMUM OF 10 RECEPTACLES SHALL BE ON EACH BRANCH CIRCUIT.

E. WEATHERPROOF COVERS SHALL HAVE A LID SO THAT PLUGS MAY BE INSTALLED WITHOUT COMPROMISING THE WP FUNCTION, EQUAL TO INTERMATIC GUARDIAN ONE WPP100C.

F. ALL OUTLETS (INCLUDING TELEPHONE, CABLE TV AND DATA) SHALL HAVE COVER PLATES, BLANK IF NOT USED.

PART 5: DISCONNECT SWITCHES

A. DISCONNECT SWITCHES SHALL BE HEAVY-DUTY TYPE IN NEMA 1 ENCLOSURES UNLESS OTHERWISE INDICATED. FUSED OR NON-FUSED AS INDICATED. FUSED SWITCHES SHALL HAVE REJECTION-TYPE FUSE CLIPS. SWITCHES SHALL BE SQUARE D, OR EQUAL. TYPES SHALL BE CLASS R4, TIME DELAY. A SET OF 3 SPARE FUSES OF EACH SIZE AND TYPE SHALL BE FURNISHED TO THE OWNER.

PART 6: PANELBOARDS

A. PANELBOARDS SHALL BE DEAD FRONT SAFETY TYPE. ALL CIRCUIT BREAKERS SHALL BE MOLDED CASE, AIR TIGHT, AUTOMATIC THERMAL MAGNETIC TYPE, CALIBRATED FOR 40% OR AMBIENT COMPENSATION. CABINET SHALL BE 20 INCHES WIDE MINIMUM WITH NOT LESS THAN 4 INCH WIRING CUTTERS AT TOP, SIDES, AND BOTTOM. SQUARE D "M", "MGGC", OR EQUAL. BUS SHALL BE ALUMINUM WITH RATINGS AS INDICATED ON DRAWINGS. LUGS SHALL BE SIZED TO ACCOMMODATE CONDUCTORS INDICATED ON THE POWER RIBBON DIAGRAM.

B. PROVIDE HANDLE LOCK-ON DEVICES ON ALL CIRCUIT BREAKERS CONNECTED TO EMERGENCY, EXIT, AND NIGHT LIGHTING, FIRE ALARM, TELEPHONE AND SECURITY SYSTEMS.

C. CIRCUIT BREAKERS USED FOR SWITCHING OF LIGHTING OR SIGN CIRCUITS SHALL BE SWITCHING RATED AND SHALL BE MARKED "SW".

PART 7: DRY TYPE TRANSFORMERS

A. TRANSFORMERS SHALL HAVE FOUR 2% BELOW-RATED VOLTAGE PRIMARY TAPS AND TWO 0% BELOW-RATED SECONDARY VOLTAGE TAPS. MINIMUM CONNECTIONS SHALL BE AT SIDES THROUGH LIQUID-TIGHT FLEXIBLE METAL CONDUIT. SECONDARY NEUTRAL SHALL BE PROPERLY GROUNDED AS A SERVICE GROUND. SQUARE D CLASS 7000, OR EQUAL. PROVIDE "X" RATED TRANSFORMERS AS INDICATED ON DRAWINGS.

PART 8: LIGHT FIXTURES

A. CATALOG NUMBERS GIVEN DENOTE MINIMUM QUALITY AND PERFORMANCE. REQUIRED. EQUAL EQUIPMENT BY OTHER MANUFACTURERS IS ACCEPTABLE AS INDICATED ON THE LIGHT FIXTURE SCHEDULE.

B. LAY-IN FIXTURES SHALL BE SUSPENDED FROM STRUCTURE WITH 2 WIRES AT OPPOSITE CORNERS. DO NOT SUPPORT FROM CEILING GRID.

C. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHT FIXTURES.

D. ALL RECESSED LIGHTING FIXTURES SHALL BE THERMALLY PROTECTED.

PART 9: TELEPHONE/DATA SYSTEM

A. FURNISH AND INSTALL A COMPLETE TELEPHONE/DATA CONDUIT SYSTEM AS INDICATED ON THE DRAWINGS. ALL OUTLET BOXES FOR TELEPHONE AND/OR DATA JACKS SHALL BE DOUBLE GANG WITH SINGLE GANG OPENING.

B. PULL AND LEAVE IN EACH CONDUIT ONE PULL CORD FOR PULLING IN CABLE. ALL WIRING, OUTLETS AND EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY THE OWNERS TELEDATA SUPPLIER.

C. TELEPHONE SERVICE CONDUITS SHALL BE PROVIDED TO THE PROPERTY LINE OR AS INDICATED ON THE DRAWINGS.

D. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A #6 AWG GREEN COPPER WIRE IN A 3/4" CONDUIT FROM THE NEAREST OUTLET METAL MAIN TO A LUG AT THE TELEPHONE/DATA BACKBOARD.

PART 10: LIGHTING CONTROLS

A. FURNISH AND INSTALL AN ELECTRONIC TIME CONTROLLER WHERE INDICATED. CONTROLLER SHALL BE CAPABLE OF SWITCHING 40 AMPERES PER POLE CONTINUOUSLY AT 120 VOLTS AND SHALL BE SPST (DPST, 3PST, DP1ST, SP1ST, AS REQUIRED).

B. TIME CONTROLLER SHALL HAVE THE FOLLOWING:

B.1. A MINIMUM 7 DAY CLOCK

B.2. BE CAPABLE OF BEING SET FOR SEVEN DIFFERENT DAY TYPES PER WEEK.

B.3. INCORPORATES AN AUTOMATIC HOLIDAY "SHUTOFF" FEATURE, WHICH TURNS OFF ALL CONTROLLED LIGHTING LOADS FOR AT LEAST 24 HOURS AND THEN RESUMES NORMALLY SCHEDULED OPERATIONS.

B.4. HAVE PROGRAM BACKUP CAPABILITIES, WHICH PREVENT THE LOSS OF PROGRAM AND TIME SETTINGS FOR AT LEAST 10 RESTARTS OF POWER INTERRUPTED.

B.5. INCLUDE AN OVERIDE SWITCH THAT COMPLES WITH THE FOLLOWING:

B.5.1. SHALL BE A MANUAL CONTROL.

B.5.2. WHEN INITIATED, SHALL PERMIT THE CONTROLLED LIGHTING TO REMAIN ON FOR NOT MORE THAN 15 HOURS.

B.5.3. ANY INDIVIDUAL OVERIDE SHALL NOT CONTROL THE LIGHTING FOR AN AREA NOT LARGER THAN 5,000 SQUARE FEET.

C. LIGHTING CONTACTORS SHALL SWITCH A LOAD AT 120 VOLTS, 60 HZ AND SHALL HAVE THE NUMBER OF POLES INDICATED ON THE DRAWINGS. THE CONTACTOR SHALL BE CONTINUOUSLY RATED 20 AMPERES PER POLE FOR ALL TYPES OF BALLAST AND TUNGSTEN LIGHTING AND RESISTANCE LOADS.

D. ALL LIGHTING CONTACTORS SHALL BE ELECTRICALLY HELD AND HAVE A NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED.

PART 11: FIRE ALARM SYSTEM

A. SYSTEM SHALL BE A CENTRALIZED, ANALOG, ADDRESSABLE, FULLY ELECTRONICALLY SUPERSEDED INCLUDING AUXILIARY SYSTEMS INTERCONNECT WIRING SYSTEMS LISTED BY UL IN COMPLIANCE WITH ALL APPLICABLE NFPA 72 AND OTHER STANDARDS AS WELL AS THE AMERICANS WITH DISABILITIES ACT (ADA). ALL FINAL CONNECTIONS, TESTING AND ADJUSTMENTS SHALL BE PERFORMED BY OR UNDER DIRECT SUPERVISION OF AN AUTHORIZED FACTORY REPRESENTATIVE. SYSTEM SHALL BE SIMPLEX, NOTIFIER, EDWARDS OR EQUAL, AS ACCEPTED BY THE ENGINEER. SYSTEM SHALL HAVE A 24HR MINIMUM BATTERY BACKUP.

B. INITIATING DEVICE ACTIVATION SHALL CAUSE OPERATION OF THE PROPER ZONE ALARM CIRCUIT IN THE CONTROL PANEL, AND OPERATE ALL AUDIBLE INDICATING ALARMS. ALL AIR HANDLING UNITS SHALL BE STOPPED UPON ANY ALARM INPUT. EACH AIR HANDLER UNIT SHALL BE PROVIDED WITH A SYSTEM CONTROLLED RELAY TO EFFECT SHUTDOWN. ALL ALARM UNITS SHALL BE PROVIDED WITH A SYSTEM CONTROLLED RELAY TO EFFECT SHUTDOWN. ALL ALARM UNITS SHALL BE PROVIDED WITH A SYSTEM CONTROLLED RELAY TO EFFECT SHUTDOWN. ALL ALARM UNITS SHALL BE PROVIDED WITH A SYSTEM CONTROLLED RELAY TO EFFECT SHUTDOWN. ALL ALARM UNITS SHALL BE PROVIDED WITH A SYSTEM CONTROLLED RELAY TO EFFECT SHUTDOWN.

C. MANUAL STATIONS SHALL BE NON-CODED, WITH PULL LEVER AND GLASS ROD, SEMI-FLUSH MOUNTED. COMBINATION LIGHT AND HORN SIGNALS SHALL BE FLUSH MOUNTED. WIRING SHALL BE IN CONDUIT AS PREVIOUSLY SPECIFIED. #14 AWG MINIMUM, THIN WALL, THE USE OF PLenum RATED CABLE IS NOT ALLOWED. JUNCTION BOXES USED FOR THE FIRE ALARM SYSTEM SHALL BE PAINTED RED.

D. SPRINKLER SYSTEM TAMPER SWITCHES SHALL BE CONNECTED INTO A COMMON ZONE WHICH SHALL DISTINGUISH BETWEEN A CIRCUIT FAULT AND A CLOSED VALVE. A CLOSED VALVE SHALL BE INDICATED AS AN ALARM CONDITION BUT WILL NOT ACTIVATE THE AUDIBLE ALARMS OR CAUSE A SIGNAL TO BE TRANSMITTED TO THE CENTRAL STATION.

E. THE FIRE ALARM SUPPLIER SHALL A SEPARATE SET OF PLANS FOR A SEPARATE FIRE ALARM PERMIT. THE ENGINEER IS NOT RESPONSIBLE FOR PRODUCING THESE DRAWINGS OR FOR SUBMITTING FOR THIS PERMIT. IT IS THE SOLE RESPONSIBILITY OF THE FIRE ALARM SUPPLIER.

F. ALL STROBES LOCATED WITHIN THE SAME AREA SHALL BE SYNCHRONIZED.

PART 12: FIRE STOPPING

A. ALL PENETRATIONS OF NON-RATED PENETRATIONS SHALL BE SEALED WITH RATED MATERIALS MEETING ASTM E-814.

B. PROVIDE FIRE STOPPING DEVICES (S) OR SYSTEMS WHICH HAVE BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814. INSTALL THE DEVICES (S) OR SYSTEMS IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE THE APPROPRIATE DEVICES (S) OR SYSTEMS WITH AN "X" RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED.

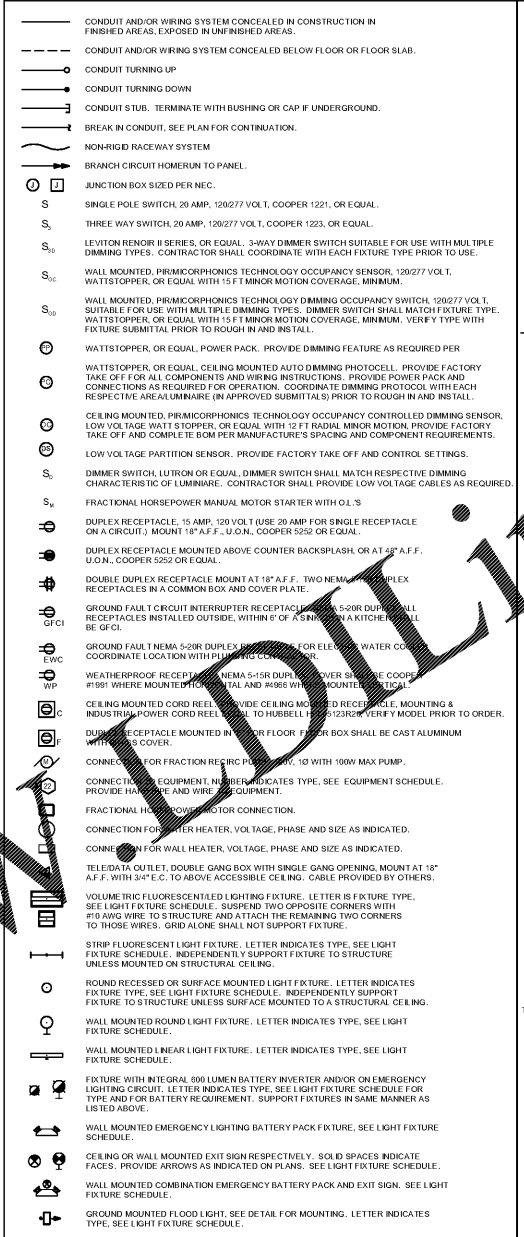
C. DEVICES (S) AND/OR SYSTEMS SHALL BE BY UL LISTED OR EQUAL/VALENT.

D. WHERE OPENINGS FOR INSTALLATION OF ELECTRICAL BOXES EXCEEDS 16 SQUARE INCHES IN RATED WALLS OR PARTITIONS, THE OPENING SHALL BE PROTECTED AS REQUIRED BY THE APPROPRIATE WALL LISTING TYPE.

PART 13: SITE VERIFICATION

A. EACH BIDDER SHALL VISIT THE PROJECT SITE PRIOR TO BID AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS. FAILURE TO VISIT THE SITE SHALL NOT BE A REASON FOR THE CONTRACTOR FROM PERFORMING THE REQUIRED WORK NOR SHALL IT BE AN ACCEPTABLE REASON FOR REQUESTING ADDITIONS TO THE CONTRACT.

ELECTRICAL SYMBOLS SCHEDULE



ABBREVIATIONS

A	AMP/FEET
AF	AMP FRAME
AFB	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ASW	ABOVE SHOWN WINDOW
C	CIRCUIT
EWC	ELECTRIC WATER COOLER
FLA	FULL LOAD AMPS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GROUND	ISOLATED GROUND
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
IS	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KWH	THOUSAND WHOLE HOURS
KW	KILOWATT
MCC	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MISC	MISCELLANEOUS
MLO	MAIN LUGS ON Y
MTO	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NUMBER	NUMBER
NTS	NOT TO SCALE
P	POLE
PBL	PANEL BOARD
SCWT	SCREW COVER WIRE TROUGH
SPD	SURGE PROTECTION DEVICE
SW	SWITCH
TELEDATA	TELEPHONE/DATA
TY	TYPICAL
UG	UNDERGROUND
VOLT	VOLT
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
XMR	TRANSFER MER
3R	NEMA 3R ENCLOSURE

NOTES:

- SEE DEVICE MOUNTING ELEVATION FOR MOUNTING HEIGHTS.
- SEE SPECIFICATIONS FOR DEVICE COLOR AND COVER PLATE STYLE.

ELECTRICAL SYMBOLS SCHEDULE

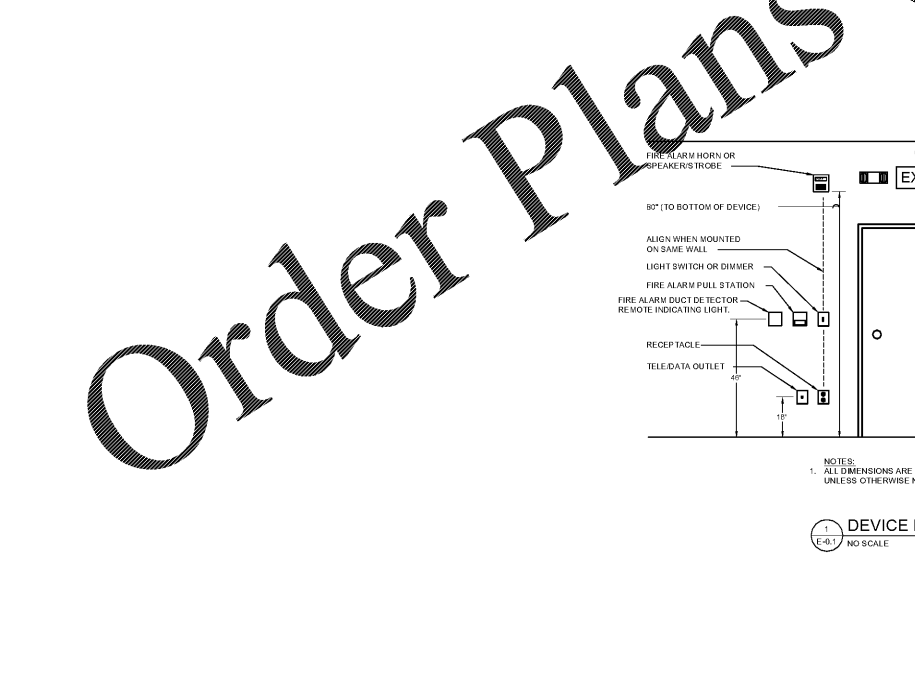


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MIDSOUTH CARPENTER'S TRAINING TRUST
La Verge, TN

PROJECT NUMBER 1992
ISSUE DATE
FOR PERMIT 09.30.20



MECH/ELEC SCHEDULE

ITEM	QUANTITY	WATTS	VOLTAGE	DISCONNECT
EF-1	(54.4)	-	120V-1Ø	S ₁ SWITCH W/LIGHTS
EF-2	(56.1)	-	120V-1Ø	S ₁ SWITCH W/LIGHTS
EF-3	(135)	-	120V-1Ø	S ₁ SWITCH W/LIGHTS
EF-4	1.5 HP	-	480V-3Ø	3ØF15-3P
EF-5	(19.4)	-	120V-1Ø	S ₁ W/T-STAT
EF-12	1.0 HP	-	480V-3Ø	3ØF15-3P W/PAN SWITCH
ELM-1.6	25.0 HP	-	480V-3Ø	3ØF25-3P
ELM-2	3.3 KW	-	480V-3Ø	3ØNF-3P
DWH-1	1200W	-	480V-3Ø	3ØNF-3P
DWH-2	2000	-	208V-1Ø	3ØNF-3P
AH-45	18.0	25	480V-3Ø	3ØF25-3P
AH-123	30.0	40	480V-3Ø	6ØF40-3P
HP-45	6.0	15	480V-3Ø	3ØF15-3P-3P
HP-123	9.0	15	480V-3Ø	3ØF15-3P-3P

CONTRACTOR

CONTRACTOR	COL OR TAG	POLES	CIRCUITS SWITCHED
LC-1	120	9	1L-19,20,22,24,26,28,30
LC-2	120	8	1H-44,46,48,50
LC-3	120	8	1H-58,60
LC-4	120	3	1L-30,41

TYPICAL LIGHTING CONTROL DETAIL
E-0.1
NO SCALE

120VOLT CONTROL CIRCUIT (L-252)

120V

277V

277V

120V

GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL REVIEW ENTIRE SET OF CONTRACT DOCUMENTS INCLUDING BUT NOT NECESSARILY LIMITED TO ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND ENTIRE PROJECT MANUAL. ELECTRICAL CONTRACTOR SHALL ACKNOWLEDGE AND INCLUDE IN THE SCOPE OF WORK (CONTRACT) ALL CONDITIONS PERTINENT TO THE COMPLETION OF THE ELECTRICAL WORK. ELECTRICAL CONTRACTOR SHALL FULLY COORDINATE ELECTRICAL WORK WITH THE INSTALLATION OF WORK BY ALL OTHER TRADES AND MAKE NECESSARY FIELD ADJUSTMENTS AS REQUIRED TO ACCOMMODATE THE ELECTRICAL INSTALLATION. ALL OF THE ABOVE SHALL BE INCLUDED IN THE SCOPE OF WORK AT NO ADDITIONAL COST TO THE OWNER.

B. VERIFY ALL REQUIREMENTS AND COORDINATE EXACT LOCATION OF INCOMING ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT STARTUP. NOTIFY ENGINEER OF ANY CHANGES AS MAY BE REQUIRED.

C. ENGRAVED, LAMINATED PLASTIC IDENTIFICATION PLATES SHALL BE FURNISHED AND INSTALLED ON ALL PANELS AND SWITCHGEAR. PLATES SHALL BE AFFIXED TO FRONT PANELS, INDICATING PANEL NAME, VOLTAGE AND AMPERAGE. PROVIDE UNLATCHED PANEL DIRECTORIES FOR ALL PANELS.

D. ELECTRICAL CONTRACTOR SHALL CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATIONS, VISIT THE SITE OF THE WORK, AND FULLY INFORM HIMSELF AS TO ALL CONDITIONS AND MATTERS THAT CAN IN ANY WAY AFFECT THE WORK OR THE COST THEREOF. SHOULD THE CONTRACTOR FIND DISCREPANCIES IN OR OMISSIONS FROM THE DRAWINGS, SPECIFICATIONS OR OTHER DOCUMENTS OR BE IN DOUBT AS TO THEIR MEANING, NOTIFY THE ARCHITECT/ENGINEER AT ONCE, IN WRITING, OF ANY DISCREPANCIES OR CONFLICTS. IF ANY ADDITIONAL CLARIFICATION OR COORDINATION IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SUCH CLARIFICATION PRIOR TO SUBMITTING ANY BID. LACK OF SUCH NOTIFICATION SHALL BE CONSIDERED TO INDICATE NO DISCREPANCIES OR CONFLICTS. IF ANY ADDITIONAL CLARIFICATION WILL NOT BE GRANTED AFTER AWARD OF CONTRACT FOR ANY WORK REQUIRED TO COMPLY WITH THESE REQUIREMENTS.

E. SHARED NEUTRALS ARE NOT ALLOWED. EACH CIRCUIT SHALL HAVE ITS OWN INDIVIDUAL NEUTRAL. EACH CONDUIT RUN SHALL CONTAIN A GROUND WIRE. CONDUIT UNLESS IS NOT AN ACCEPTABLE GROUND PATH.

F. TO G.C. AND ALL SUBCONTRACTORS: NO PRICING SHOULD BE DONE FROM A PARTIAL SET AND NO CHANGE ORDER WILL BE ALLOWED FOR PRICING BASED ONLY ON A PARTIAL SET OF REVIEW OF A SINGLE TRADE'S DRAWINGS. ALL TRADES SHOULD CROSS REFERENCE ARCHITECTURAL SHEETS AND ALL OTHER TRADES FOR ADDITIONAL INFORMATION, CLARIFICATIONS AND COORDINATION REQUIRED. TYP. RELATED TO PRICING RELATED TO ANY CONTRADICTIONS THAT MAY BE FOUND IN THE DOCUMENT SET BIDDERS SHOULD INCLUDE THE MOST RESTRICTIVE. THE MOST EXPENSIVE AS PART OF THE BID. ALL BIDS AND PRICING IN THE ENTIRETY SHALL BE BASED SOLELY ON THE FULL AND COMPLETE SET OF CONSTRUCTION DOCUMENTS BIDDING FOR THIS SPECIFIC PROJECT. TYP. NO CHANGE ORDER OR MODIFICATION TO THE CONTRACT DOCUMENTS SHALL BE MADE OR CONSIDERED BASED ON G.C. OR SUBCONTRACTOR ASSUMPTIONS BASED ON REVIEW OF A PARTIAL SET OR PART PROJECT COMPARISONS. TYP.

G. CONTRACTOR IS RESPONSIBLE FOR ISSUES THAT ARISE IN THE FIELD DUE TO THE SELECTION OF ALTERNATE EQUIPMENT TO WHAT IS SPECIFIED WITHIN THIS SET OF DRAWINGS. THIS INCLUDES, BUT IS NOT LIMITED TO, DEMAND OVERLOADS, INSUFFICIENT SPACE ALLOCATIONS, AND EQUIPMENT FAILURES.