

**ABBREVIATIONS FOR ELECTRICAL DRAWINGS**

ACB	AIR CIRCUIT BREAKER
ALT	ALTERNATE
A.C.	ALTERNATING CURRENT
AL	ALUMINUM
AWG	AMERICAN WIRE GAUGE
A	AMPERE(S)
ATS	AUTOMATIC TRANSFER SWITCH
AF	AMP FRAME
AT	AMP TRIP
BFG	BELOW FINISH GRADE
BW	BUSWAY
CLG	CEILING
CKT	CIRCUIT
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
COND	CONDUCTOR
C	CONDUIT (SEE RACEWAYS AND CONDUCTORS)
CONN	CONNECT
CC	CONTROL CABINET
CHM	COMMUNICATIONS MANHOLE
CP	CONTROL PANEL
CU	COPPER
CT	CURRENT TRANSFORMER
DM	DIMMER CONTROL
D.C.	DIRECT CURRENT
DISC	DISCONNECT
DPP	DISTRIBUTION POWER PANEL
DP	DOUBLE POLE
DT	DOUBLE THROW
DN	DOWN
E.C.	ELECTRICAL CONTRACTOR
E.HTR	ELECTRIC HEATER
EWC	ELECTRIC WATER COOLER
EMT	ELECTRICAL METALLIC TUBING
EM	EMERGENCY
EOL	END OF LINE RESISTOR
EXIST	EXISTING
XP	EXPLOSION PROOF
FDR	FEEDER
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
F.P.C.	FIRE PROTECTION CONTRACTOR
FLUOR	FLUORESCENT
F	FLOOR
F.S.C.	FOOD SERVICE CONTRACTOR
FVNR	FULL VOLTAGE NON-REVERSING FREQUENCY IN CYCLES PER SECOND
HZ	HZ
F	FUSE
FS	FUSIBLE SWITCH
GEN	GENERATOR
G.C.	GENERAL CONTRACTOR
GRD	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
H.D.	HOT DIPPED
H.I.D.	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HOA	HAND-OFF-AUTO
H.P.S.	HIGH PRESSURE METALLIC CONDUIT
IMC	INTERMEDIATE METALLIC CONDUIT
INC	INCANDESCENT
IC	INTERCOM
ISO	ISOLATED NEUTRAL
JB	JUNCTION BOX
K	KEY OPERATED
KVAR	KILOVARS
KVA	KILOVOLT AMPERE(S)
KW	KILOWATT(S)
LCT	LIGHTING CONTACTOR
LP	LIGHTING PANEL
L.P.S.	LOW PRESSURE SODIUM
LV	LOW VOLTAGE
LS	LEVEL SENSOR
MGST	MAGNETIC STARTER
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MH	MANHOLE
MTS	MANUAL TRANSFER SWITCH
MC	MECHANICAL CONTRACTOR
MIKE	MICROPHONE
MTR	MOTOR
MCC	MOTOR CONTROL CENTER
KCMIL	THOUSAND CIRCULAR MIL(S)
N/A	NOT APPLICABLE
NF	NONFUSED
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
N.I.C.	NOT IN CONTRACT
OL	OVERLOAD ELEMENT
OC	OVER COUNTER
PNL	PANEL
P	PILOT INDICATOR
PVC	POLYVINYL CHLORIDE
PLG.C	PLUMBING CONTRACTOR
PT	POTENTIAL TRANSFORMER
PF	POWER FACTOR
PP	POWER PANEL
PR1	PRIMARY
PS	PULL SWITCH
RECP	RECEPTACLE
R	RELAY
RC	REMOTE CONTROL
RGS	RIGID METAL CONDUIT
SEC	SECONDARY
SP	SINGLE POLE
ST	SINGLE THROW
SPK	SPEAKER
SMR	SURFACE METAL RACEWAY
S.S.	SOLID STATE
SST	SOLID STATE TRIP
SW	SWITCH
SWBD	SWITCHBOARD
T.C.C.	TEMPERATURE CONTROL CONTRACTOR
TEMP	TEMPORARY
T	TELEPHONE
TV	TELEVISION
TB	TERMINAL BOX
XFMR	TRANSFORMER
TYP	TYPICAL
UC	UNDER CABINET
UG	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UNG	UNGROUND
UPS	UNINTERRUPTED POWER SYSTEM
VP	VAPORPROOF
VAR	REACTIVE VOLT AMPERES
V	VOLT(S)
VA	VOLTAMP(S)
W	WATT(S)
WP	WEATHERPROOF

**MOUNTING ABBREVIATIONS**

OC	OVER COUNTER OUTLET; INSTALL BOTTOM OF OUTLET BOX 1-1/2" (38mm) ABOVE HIGHEST ELEMENT OF COUNTER (I.E., BACK SPLASH OR COUNTER TOP IF NO BACK SPLASH).
CR	CASEWORK RECESSED OUTLET; MOUNT BOX IN CASEWORK VERTICAL SURFACE.
EQ	EQUIPMENT OUTLET; FINAL TERMINATION METHOD AND EXACT LOCATION TO BE DETERMINED FROM EQUIPMENT MANUFACTURER'S SHOP DRAWINGS.
AF	ABOVE FINISHED FLOOR.
AFG	ABOVE FINISHED GRADE.
MTH	MOUNTING HEIGHT.

**ABBREVIATED LIST OF NEMA ENCLOSURE TYPES**

TYPE 1:	GENERAL PURPOSE. INDOOR.
TYPE 2:	DRIP-PROOF. INDOOR.
TYPE 3:	DUST-TIGHT. RAIN-TIGHT. INDOOR AND OUTDOOR.
TYPE 3R:	RAIN-PROOF. INDOOR AND OUTDOOR.
TYPE 4:	WATER-TIGHT AND DUST-TIGHT. NON-CORROSIVE. INDOOR AND OUTDOOR.
TYPE 4X:	WATER-TIGHT AND DUST-TIGHT. CORROSION RESISTANT. INDOOR AND OUTDOOR.
TYPE 6:	WATER-TIGHT. DUST-TIGHT. SHORT-TIME SUBMERSIBLE. INDOOR AND OUTDOOR.
TYPE 6P:	WATER-TIGHT. DUST-TIGHT. LONG-TIME SUBMERSIBLE. INDOOR AND OUTDOOR.
TYPE 7:	CLASS 1, GROUPS A, B, C, OR D. INDOOR.
TYPE 8:	CLASS 1, GROUPS A, B, C, OR D. INDOOR OR OUTDOOR.
TYPE 9:	CLASS 11, GROUPS E, F OR G. INDOOR.
TYPE 12:	DUST-TIGHT. WATERTIGHT. NONCORROSIVE LIQUID. INDOOR.
TYPE 13:	WATER-TIGHT. DUST-TIGHT. OIL-TIGHT. NON-CORROSIVE LIQUID. INDOOR.

**SWITCH OUTLET - SMALL LETTER BY THE SIDE OF SYMBOLS INDICATES THE PARTICULAR SWITCH. SAMPLE: S<sup>1</sup> = SWITCH "a"**

S	SINGLE POLE SWITCH MOUNTED AT 48" OR AS NOTED.
S <sub>2</sub>	TWO POLE SWITCH MOUNTED AT 48" OR AS NOTED.
S <sub>3</sub>	THREE WAY SWITCH MOUNTED AT 48" OR AS NOTED.
S <sub>4</sub>	FOUR WAY SWITCH MOUNTED AT 48" OR AS NOTED.
S <sub>P</sub>	SINGLE POLE BY-PASS SWITCH FOR EMERGENCY LIGHTING MOUNTED AT 48"
S <sub>P</sub>	SINGLE POLE SWITCH WITH PILOT LIGHT MOUNTED AT 48" OR AS NOTED.
S <sub>K</sub>	SINGLE POLE KEY OPERATED SWITCH MOUNTED AT 48" OR AS NOTED.
S <sub>M</sub>	H.P. RATED MANUAL MOTOR STARTER (WEATHERPROOF WHERE OUTSIDE).
S <sub>D</sub>	INCANDESCENT SLIDE CONTROL DIMMER AT 48" OR AS NOTED (1500 WATT UNLESS OTHERWISE NOTED).
S <sub>OB</sub>	OIL BURNER SWITCH
S <sub>W</sub>	WALL MOUNTED MOTION SENSOR SWITCH
S <sub>DW</sub>	DUAL WALL MOUNTED MOTION SENSOR SWITCH
S <sub>C</sub>	CEILING MOUNTED OCCUPANCY SENSOR, POWER AND RELAY PACK

**FIRE ALARM AND DETECTION SYSTEM DEVICES**

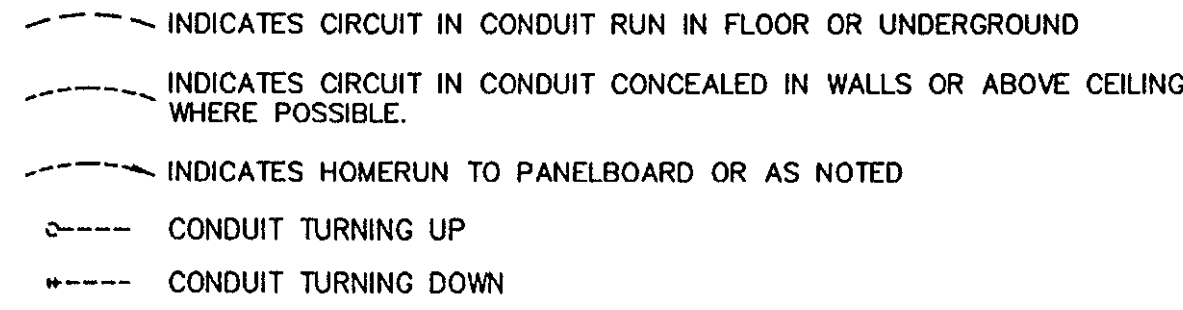
□	FIRE ALARM MANUAL PULL STATION	B - BELL
□	FIRE ALARM AUDIBLE SIGNAL	C - CHIME
□	FIRE ALARM VISUAL SIGNAL	G - GONG
□	FIRE ALARM VISUAL SIGNAL	H - HORN
□	WEATHER PROOF FIRE ALARM COMBINED AUDIBLE/VISUAL SIGNAL WITH VANDAL RESISTANT GUARD	#cd - CANDELA LEVEL
□	FIRE ALARM COMBINED AUDIBLE/VISUAL SIGNAL	
□	FIRE ALARM SMOKE DETECTOR, PHOTOELECTRIC	
□	FIRE ALARM SMOKE DETECTOR, IONIZATION	
□	FIRE ALARM DOOR HOLDER	
□	FIRE ALARM DETECTOR, RATE-OF-RISE.	
□	FIRE ALARM DETECTOR, FIXED TEMPERATURE, 135° UNLESS OTHERWISE NOTED	
MB	MASTER BOX - RECESSED	
□	SPRINKLER WATER FLOW SWITCH	
□	SPRINKLER SUPERVISED VALVE - TAMPER SWITCH	
□	DUCT TYPE SMOKE DETECTOR	
EOL	END-OF-LINE RESISTOR.	
FACP	FIRE ALARM CONTROL PANEL	
FAAN	FIRE ALARM ANNUNCIATOR	

**SECURITY**

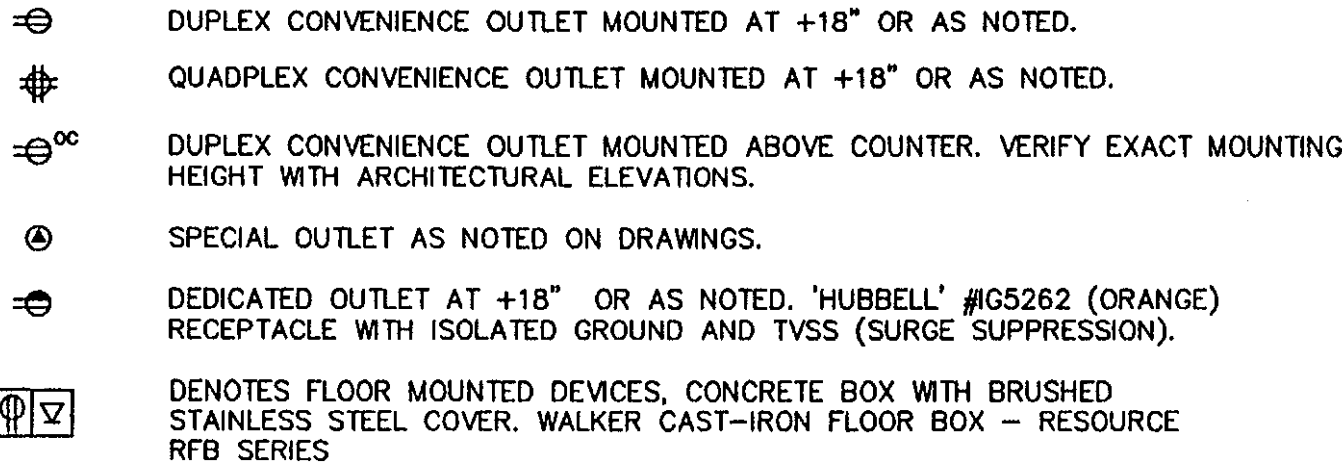
□	CAMERA
□	MONITOR
REC	RECORDER
DL	DOOR LOCKS SENTROL - 1085 SERIES
□	TELEPHONE
□	PROXIMITY SMARTCARD READERS - WSE DR 4205 SERIES
DE	EXIT DETECTOR - KANTECH T.REX SERIES
SEC	SECURITY CONTROL PANEL - WSE NEXSENRY STAR 1

EMPLOYEE ENTRANCE DOOR CONTROLS PROVIDED BY PELMAC INDUSTRIES PER STATE CONTRACT. VERIFY AND COORDINATE REQUIREMENTS.

**RACEWAYS AND CONDUCTORS**

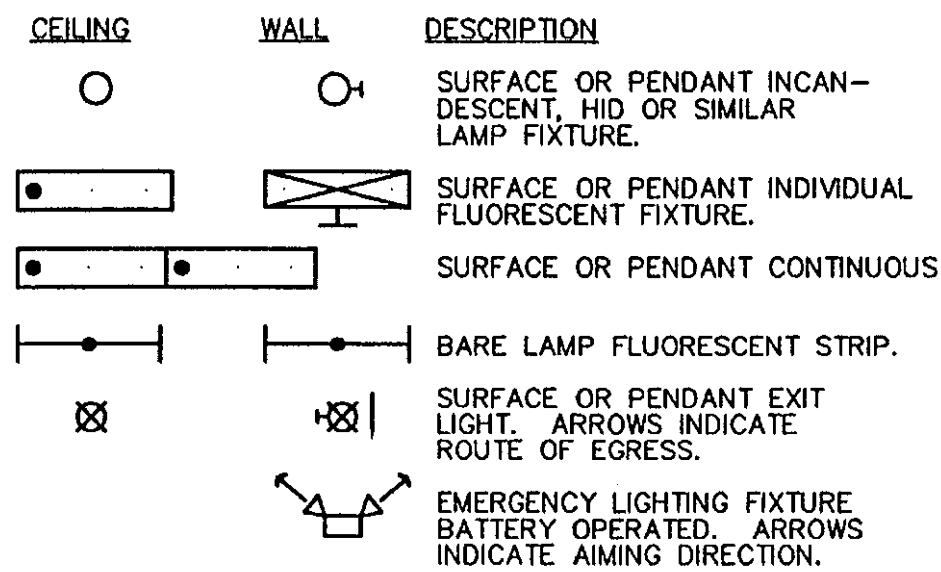


**RECEPTACLE OUTLETS - NUMERAL BY THE SIDE OF THE SYMBOL INDICATES CIRCUIT NUMBER.**

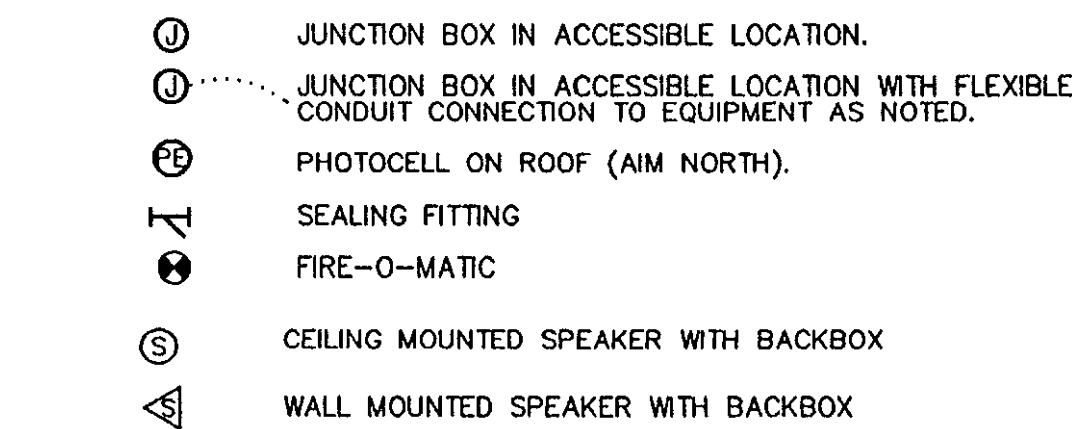


**LIGHTING**

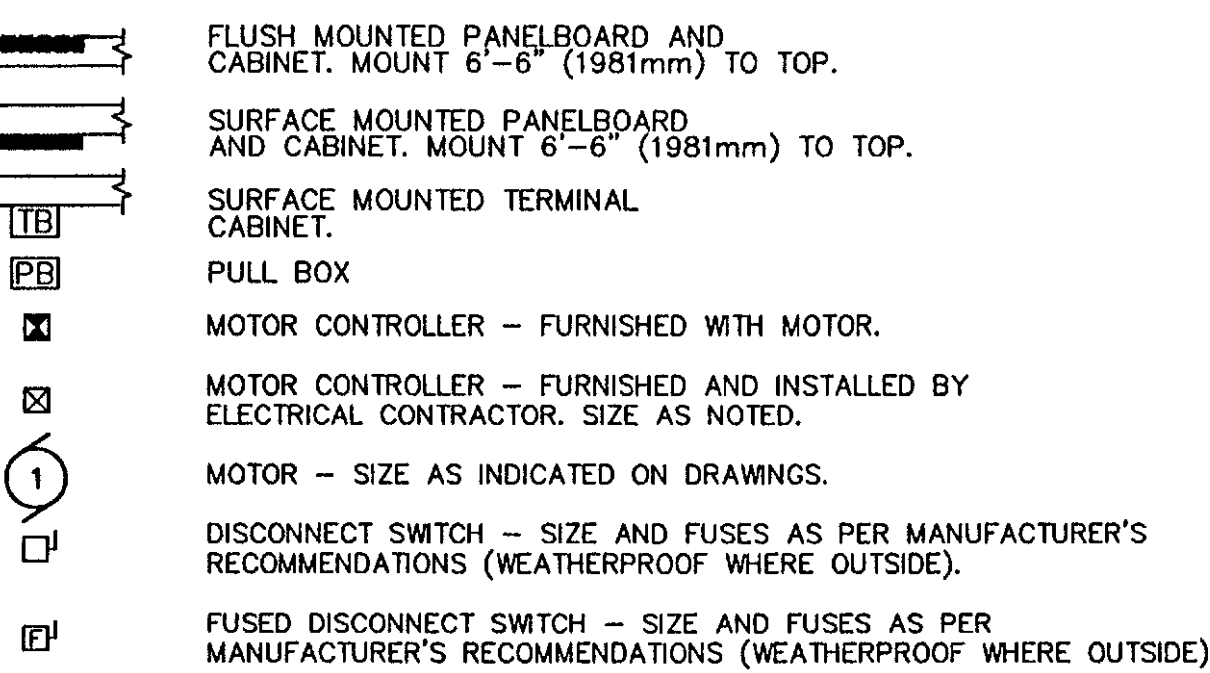
LIGHTING OUTLETS - CAPITAL LETTER INDICATES THE FIXTURE TYPE AS SHOWN ON FIXTURE SCHEDULE. NUMERAL INDICATES CIRCUIT NO. AND SMALL LETTER DESIGNATES THE CONTROL SWITCH. MOUNTING HEIGHT PER LIGHTING FIXTURE SCHEDULE. CONTRACTOR SHALL COORDINATE ALL FIXTURES WITH LOCATIONS INDICATED ON THE ARCHITECTURAL DRAWINGS, TYPICAL.



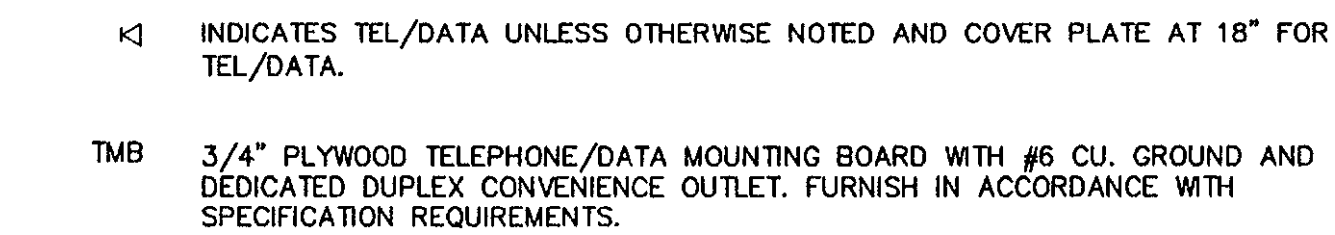
**MISCELLANEOUS**



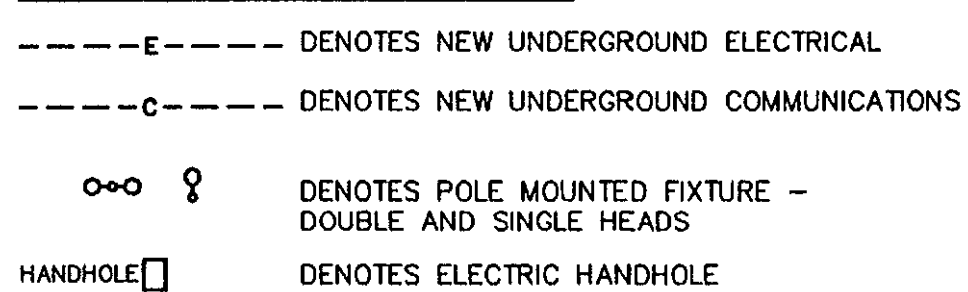
**ELECTRICAL SYSTEM COMPONENTS / EQUIPMENT**



**TELEPHONE SYSTEM DEVICES**

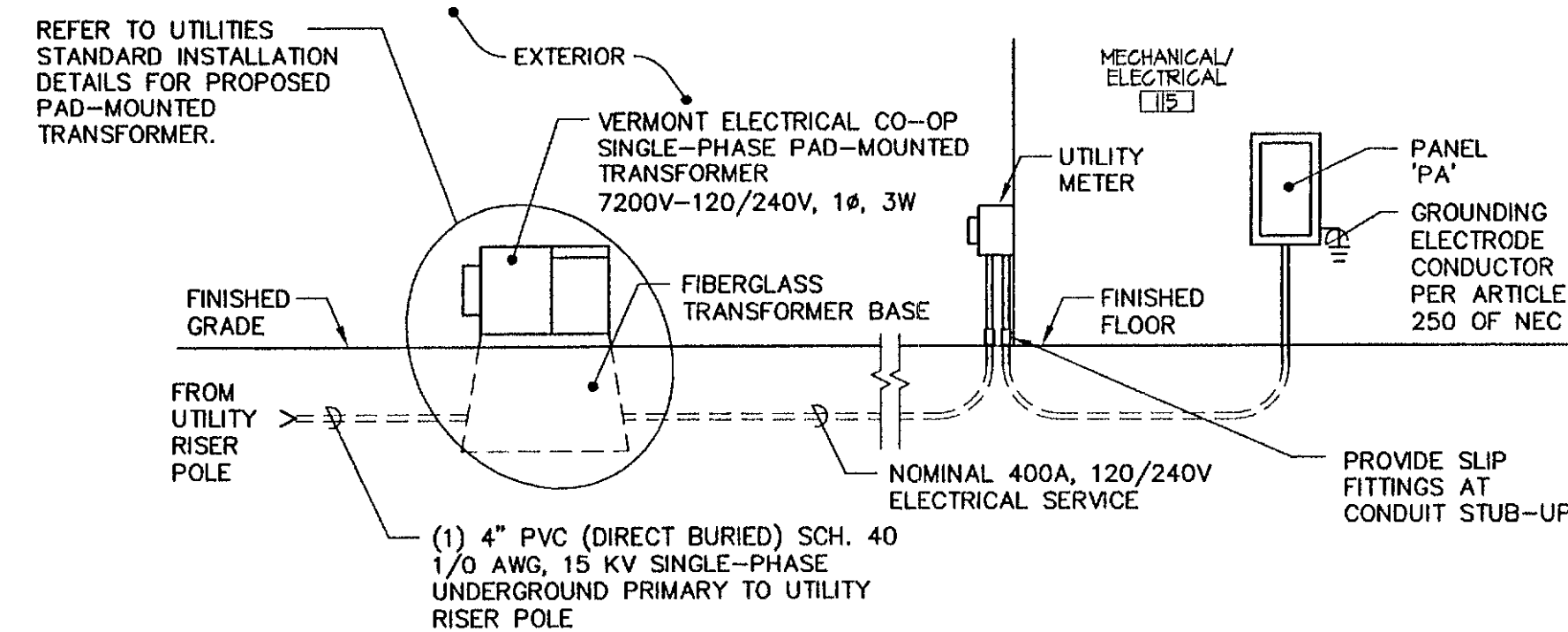


**ELECTRICAL SITEPLAN LEGEND**

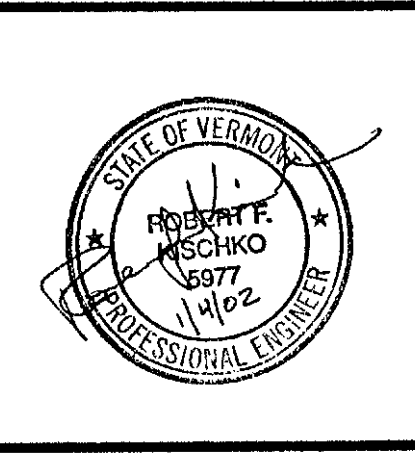


**GENERAL NOTES:**

- ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE (N.E.C.) LATEST EDITION, CONTRACTOR TO OBTAIN ALL PERMITS AND ARRANGE FOR ALL INSPECTIONS WITH AUTHORITY HAVING JURISDICTION.
- COORDINATE ALL SWITCH, RECEPTACLE AND LIGHTING FIXTURE LOCATIONS WITH THE ARCHITECT.
- ALL EXIT SIGN LIGHTING SHALL BE INSTALLED ON A SEPARATE BRANCH CIRCUIT.
- ALL LIGHTING AND POWER WIRING SHALL BE IN CONDUIT, ALL RACEWAYS SHALL BE EMT (ELECTRICAL METALLIC TUBING). ALL CONDUCTORS SHALL BE COPPER WITH GROUND (TYPICAL) W/ NUMBER OF CONDUCTORS AS REQUIRED. REFER TO PANEL SCHEDULES, TYPICAL. ALL CONDUCTORS SHALL BE COPPER, WIRE SHALL HAVE TYPE "THHN/THWN" INSULATION UNLESS OTHERWISE NOTED.
- CONTRACTOR TO LIMIT 20A, 120V BRANCH CIRCUITS TO A MAXIMUM 1920VA LOAD AND 15A, 120V BRANCH CIRCUIT TO A MAXIMUM 1440VA LOAD.
- ALL WIRING SHALL BE CONCEALED IN WALLS AND ABOVE CEILING IN FINISHED AREAS AND WHEREVER POSSIBLE. WIRING IN UTILITY AREAS (MECHANICAL SPACE) MAY BE RUN EXPOSED AS APPROVED BY THE ARCHITECT. EXPOSED WIRING SHALL BE IN CONDUIT, BE PARALLEL TO BUILDING STRUCTURAL ELEMENTS AND PRESENT A NEAT AND COMPLETE INSTALLATION.
- CONDUITS, RACEWAYS AND CABLES SHALL BE PROPERLY AND SECURELY ATTACHED TO BUILDING STRUCTURAL COMPONENTS AS REQUIRED BY N.E.C. ALL FASTENERS AND HARDWARE SHALL BE APPROVED FOR THE INSTALLATION AND THE CONDITIONS ENCOUNTERED.
- EACH OUTLET OR JUNCTION IN ANY OF THE WIRING SYSTEMS SHALL BE MADE IN AN APPROVED, METALLIC JUNCTION BOX. SUCH BOX SHALL BE SUITABLE FOR THE SIZE AND NUMBER OF CONDUCTORS AND DEVICES TO BE INSTALLED, AS WELL AS THE CONDITION ENCOUNTERED. ALL SPLICES SHALL BE MADE WITH APPROVED, MECHANICAL CONNECTORS.
- CONTRACTOR SHALL VERIFY ALL STRUCTURAL, ARCHITECTURAL AND MECHANICAL CONDITIONS (DUCT CLEARANCES, COUNTRY HEIGHTS, DOOR SWINGS, ETC.) PRIOR TO ROUGH IN FOR ELECTRICAL EQUIPMENT.
- ALL ELECTRICAL WORK SHALL BE CAREFULLY COORDINATED WITH THE WORK OF OTHER TRADES AND ON-SITE CONDITIONS. WHERE CUTTING, DRILLING OR ALTERATION TO THE WORK OF OTHERS IS NECESSARY, FOR THE PROPER INSTALLATION OF ELECTRICAL EQUIPMENT, SUCH WORK SHALL BE PLANNED IN ADVANCE WITH THE GENERAL CONTRACTOR AND SHALL BE CAREFULLY DONE. ANY DAMAGE TO THE BUILDINGS OR EQUIPMENT SHALL BE REPAIRED BY PROPERLY TRAINED PERSONNEL, TO THE SATISFACTION OF THE ARCHITECT, AT NO ADDITIONAL COST TO THE OWNER.
- DURING ROUGH IN AND FINISHED STAGES OF CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT AND KEEP CLEAN ALL ELECTRICAL EQUIPMENT, PANELS, FIXTURES AND DEVICES.
- THE CONTRACTOR SHALL PROVIDE ALL INFORMATION ABOUT EQUIPMENT WHICH IS BEING FURNISHED TO THE GENERAL CONTRACTOR FOR COORDINATION PURPOSES. THE CONTRACTOR SHALL PROVIDE ALL INSTALLATION DETAILS AND SUPPORT COMPONENTS TO THE GENERAL CONTRACTOR SO THAT THESE MAY BE BUILT INTO THE CONSTRUCTION IN A TIMELY MANNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF THE FINAL LOCATIONS OF MECHANICAL, HVAC AND OWNER'S EQUIPMENT AND POWER CONNECTION DETAILS SO THAT THE ASSOCIATED ELECTRICAL WORK WILL BE PROPERLY COORDINATED AND INSTALLED.
- PROVIDE EACH MECHANICAL FAN, PUMP OR HVAC UNIT WITH FUSED DISCONNECT, WEATHERPROOF NEMA 3R & 12 (WP), FOR OUTDOOR, NEMA 1 FOR INDOOR. FUSE TO MATCH EQUIPMENT NAMEPLATE OF EQUIPMENT.
- THE ARCHITECT RESERVES THE RIGHT TO RELOCATE ANY LIGHTING FIXTURE AND/OR ALL EXPOSED ELECTRICAL DEVICES SHOWN TO WITHIN FIVE (5) FEET OF THAT LOCATION AS TO WORK WITH FINAL FIT-UP REQUIREMENTS IN FINISHED AREAS NOT INCLUDING MECHANICAL/ELECTRICAL ROOM 115 AND UNFINISHED ATTIC SPACE 201.
- ALL MECHANICAL EQUIPMENT SHALL HAVE HACR RATED BREAKERS PER N.E.C. REQUIREMENTS.
- INSTALL EMERGENCY LIGHTING FIXTURES AHEAD OF LOCAL SWITCHING PER N.E.C. ARTICLE 701-11(f).
- ALL WIRING SHALL BE ROUTED CONCEALED IN FINISH SPACES, UTILIZE SURFACE RACEWAY IN MECH/ATTIC SPACES ONLY. (WITH ALL NECESSARY FITTINGS/HARDWARE AND ATTACHMENT) WITH STRANDED TYPE TYPE THHN/THWN CONDUCTOR. ALL COMPONENTS SHALL BE PAINTED AS DIRECTED BY ARCHITECT. COORDINATE MOUNTING WITH ARCHITECT.
- THE INTERIOR ELECTRICAL SYSTEM SHALL BE COMPLETELY AND EFFECTIVELY GROUNDING AS REQUIRED BY THE NEC. ALL METALLIC RACEWAYS SHALL BE MECHANICALLY AND ELECTRICALLY SECURE ALL JOINTS AND ALL BOXES, CABINETS, FITTINGS, AND EQUIPMENT.
- UPON COMPLETION OF WORK THE INSTALLING CONTRACTOR SHALL PROVIDE ALL PANELBOARD CIRCUITS DIRECTORY CARDS TO REFLECT AS-BUILT CONDITIONS.
- ALL RACEWAYS SHALL PROVIDED WITH EQUIPMENT GROUND CONDUCTOR. EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL ELECTRICAL RACEWAYS AND SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 250 AND SHALL BE CONTINUOUS.
- ELECTRICAL INSTALLATION CONTRACTOR SHALL CLEARLY IDENTIFY ALL INCOMING CONDUCTORS BY CIRCUIT NUMBER DURING INSTALLATION IN THE DISTRIBUTION PANELS (E.G. CABLE MARKERS #1, #11 ETC).
- LOCATION OF ALL OUTLETS SHOWN ON DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL CHECK ALL MEASUREMENTS AND VERIFY EXACT LOCATION WITH ARCHITECT. THE ARCHITECT RESERVES THE RIGHT TO RELOCATE ANY OR ALL OUTLETS SHOWN TO WITHIN FIVE (5) FEET OF THAT LOCATION AS TO WORK WITH FINAL FIT-UP REQUIREMENTS IN FINISHED AREAS, NOT INCLUDING MECHANICAL/ELECTRICAL ROOM 115 AND UNFINISHED ATTIC SPACE 201.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLATION TESTING, CALIBRATING, AND OTHERWISE MAKING OPERATIONAL ALL DEVICES AND EQUIPMENT SHOWN ON THESE DRAWINGS.
- IT IS THE INTENT OF DRAWINGS AND SPECIFICATION, TO OBTAIN A COMPLETE AND SATISFACTORY INSTALLATION. AN ATTEMPT HAS BEEN MADE TO SEPARATE AND DEFINE THE WORK OF THE CONTRACTOR, DRAWINGS ARE DIAGRAMMATIC, BUT SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION OF THE FACILITY AND THE WORK OF OTHER TRADES WILL PERMIT. THE DRAWINGS ARE NECESSITY UTILIZE SYMBOLS AND SCHEMATIC DIAGRAMS TO INDICATE VARIOUS ITEMS OF WORK. THEREFORE, NO INTERPRETATION WILL BE MADE FROM THE LIMITATION OF SYMBOLS AND DIAGRAMS THAT ANY ELEMENTS NECESSARY OF THE COMPLETE INSTALLATION ARE EXCLUDED. THE ARCHITECT SHOULD BE NOTIFIED OF AN DISCREPANCIES, OMISSIONS, CONFLICTS, OR INTERFERENCE WHICH OCCUR BETWEEN VARIOUS DRAWINGS AND SPECIFICATIONS. IF SUCH NOTIFICATION IS NOT RECEIVED, THE INSTALLING CONTRACTOR(S) SHALL BE RESPONSIBLE FOR THEIR INTERPRETATIONS.
- OUTLETS TO HAVE GROUND TERMINAL UP.



**ELECTRICAL RISER DIAGRAM**  
NOT TO SCALE



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AND ELECTRICAL**  
DUPRESNE-HENRY  
Precision Park  
North Springfield VT 05150-0024  
(802)-886-2261

**REVISIONS**

NO.	DATE	DESCRIPTION

**PROJECT**

**DERBY WELCOME CENTER**  
PROJECT #10191-3(8)

**NEW FACILITY**

DERBY  
VERMONT

DATE:	01/07/02
SCALE:	NONE
CHECKED:	
PROJECT NO:	2003

**ELECTRICAL LEGEND, NOTES & FIXTURE SCH.**

**E0.1**