ELECTRICAL SYMBOLS

LIGHTING SYMBOLS

- OUTDOOR LUMINAIRE POLE MOUNTED
- OUTDOOR LUMINAIRE POLE MOUNTED W/ FLOOD LAMP MOUNTED BELOW
- OUTDOOR WALL PACK LIGHT
- FLUORESCENT LUMINARIES STRIP AND GRID LAY-IN
- CEILING MOUNTED LUMINAIRE
- PUCK LIGHT (UNDERCOUNTER LIGHTING)
- RECESSED CAN LIGHT
- VT INCANDESCENT VAPOR TIGHT LUMINAIRE (PER SCHEDULE)
- BATHROOM VANITY LUMINAIRE
- WALL MOUNTED LUMINAIRE WITH INTEGRAL PHOTOSWITCH
- WALL MOUNTED LUMINAIRE
- RECESSED STAIRWAY LUMINAIRE
- CEILING FAN WITH OR WITHOUT LIGHT MOUNTED ON APPROVED BOX
- ROUND BOLLARD

EMERGENCY LIGHTING SYMBOLS

- EXIT LIGHT WALL MOUNTED
- EXIT LIGHT CEILING MOUNTED
- EXIT LIGHT AND EMERGENCY LIGHT COMBINATION
- EMERGENCY LIGHT UNIT BATTERY POWERED
- EMERGENCY WALL REMOTE HEAD

POWER DISTRIBUTION SYMBOLS

- WORK ZONE / NO STORAGE / THIS AREA — DISTRIBUTION PANEL SHOWN WITH WORK FREE ZONE PER NEC CHAPTER 110.26
- M — MAIN KWH METER, PER LOCAL POWER UTILITY COMPANY
- SAFETY SWITCH (NON FUSED)
- SAFETY SWITCH (FUSED)
- ELECTRIC MOTOR
- ELECTRICAL DISCONNECT
- COMBINATION MOTOR STARTER

DATA/TELEPHONE SYMBOLS

- TELEPHONE JACK
- V/D — TELEPHONE/DATA NETWORK JACK
- INTERCOM SYSTEM OUTLET
- B — DOOR BELL/CHIME OUTLET
- S — SECURITY SYSTEM OUTLET
- TV — TV CABLE JACK
- V — VIDEO PROJECTION JACK

SWITCH SYMBOLS

- SINGLE POLE SWITCH
- 3 — THREE WAY SWITCH
- DP — DOUBLE POLE SWITCH
- SINGLE POLE SWITCH WITH PILOT LIGHT
- OS — OCCUPANCY SENSOR SWITCH
- OS — OCCUPANCY SENSOR

FIRE ALARM SYMBOLS

- FIRE ALARM HORN
- F — PULL STATION
- FIRE ALARM STROBE
- OR FIRE ALARM CONTROL PANEL / FIRE ALARM ANNUNCIATOR PANEL
- S — SMOKE DETECTOR (ALARM)
- FIRE ALARM COMBINATION HORN & STROBE
- HEAT DETECTOR
- CARBON MONOXIDE DETECTOR

POWER SYMBOLS

- DUPLEX RECEPTACLE 20 AMP
- SINGLE RECEPTACLE
- DOUBLE DUPLEX RECEPTACLE
- WP — DUPLEX RECEPTACLE WEATHER PROOF
- GFCI — DUPLEX RECEPTACLE, GFCI GROUND FAULT CIRCUIT INTERRUPTER
- TP — DUPLEX RECEPTACLE, WITH TAMPER RESISTANT
- 60A — 220 V RECEPTACLE, AMPERAGE AS NOTED
- DUPLEX RECEPTACLE 20 AMP FLOOR OR CEILING MOUNTED
- D — 20 AMP DROP CORD, WITH GFCI PROTECTION
- 500 WATT — BASEBOARD HEATER
- ELECTRIC HAND DRYER
- J — JUNCTION BOX
- CUH-X — CABINET UNIT HEATER

LOW VOLTAGE SYMBOLS

- PUSH BUTTON CONTROLLER
- B — SCHOOL BELL
- BT — BELL TRANSFORMER
- DB — DOORBELL
- SC — SECURITY CAMERA
- CLOCK

ONE LINE DIAGRAM SYMBOLS

- GROUND
- FUSE
- CIRCUIT BREAKER
- SWITCH – SHOWN IN OPEN POSITION
- M — KILOWATT HOUR METER
- FIXED FUSE
- TRANSFORMER
- FUSED SWITCH (SHOWN CLOSED)
- MAGNETIC OVERLOADS
- A — AMMETER
- V — VOLT METER
- PANELBOARD
- TRANSFER SWITCH
- E-STOP — EMERGENCY STOP PUSHBUTTON
- MUSHROOM HEAD PUSHBUTTON
- TIMER RELAY
- NORMALLY CLOSED OVERLOAD
- NORMALLY OPEN TIMER CONTACTS
- R — ILLUMINATED PUSHBUTTON SWITCH

ABBREVIATIONS

A	AMPERES
AC	AIR CONDITIONING UNIT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AHJ	AUTHORITY HAVING JURISDICTION
ARCH	ARCHITECTURAL
AUTO	AUTOMATIC
AT	AUTOTRANSFORMER
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CR	CARD READER
CS/CB	COMBINATION STARTER WITH CIRCUIT BREAKER
CS/FD	COMBINATION STARTER WITH FUSED DISCONNECT
CS/MCP	COMBINATION STARTER WITH MOTOR CIRCUIT PROTECTOR
CU	CONDENSER UNIT
CUH	ELECTRIC HEATER
DO	DOOR OPENER
DS	DIMMER SWITCH
DPDT	DOUBLE POLE DOUBLE THROW
DWG	DRAWING
EB	EMERGENCY BALLAST
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EQUIP	EQUIPMENT
EM	EMERGENCY LIGHT (BATTERY POWERED)
EX	EXIT LIGHT
FAAP	FIRE ALARM ANNUNCIATION PANEL
FACP	FIRE ALARM CONTROL PANEL
FLR	FLOOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HOA	HAND-OFF-AUTO
HLO	HIGH-LOW-OFF
HLOA	HIGH-LOW-OFF-AUTO
HP	HOUSE PANEL
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HZ	HERTZ
IG	ISOLATED GROUND
J	JUNCTION BOX
KW	KILOWATT
KWH	KILOWATT PER HOUR
KVA	KILOVOLT AMPERE
LC	LIGHTING CONTACTOR
LNG	LOW NOISE GROUND
LP	LIGHTING PANEL
LTG	LIGHTING
MAG	MAGNETIC FULL VOLTAGE NON-REVERSING
MAN	MANUAL
MAX	MAXIMUM
MDP	MAIN DISTRIBUTION PANEL
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MSB	MAIN SWITCHBOARD
MSS	MOTOR STARTER SWITCH
MTR	MOTOR
MV	MERCURY VAPOR
NEC	NATIONAL ELECTRICAL CODE
NL	NIGHT LIGHT
OS	OCCUPANCY SENSOR
PB	PUSH BUTTON
PC	PHOTO CONTROL
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PP	POWER PANEL
PWR	POWER
PW	PART WINDING
R	RESET
REC	RECEPTACLE
REV	REVERSING
RTU	ROOF TOP UNIT
SCA	SHORT CIRCUIT AMPS
SPST	SINGLE POLE SINGLE THROW

ABBREVIATIONS

SPDT	SINGLE POLE DOUBLE THROW
SW	SWITCH
TYP	TYPICAL
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
W	WATTS
WH	WATER HEATER
WP	WEATHER PROOF
V	VOLTS
VD	VOLTAGE DROP
VFD	VARIABLE FREQUENCY DRIVE
VSM	VARIABLE SPEED MOTOR
XFMR	TRANSFORMER

SUPPLEMENTAL LIST OF DRAWINGS

SHEET NUMBER	SHEET NAME
E0.1	ELECTRICAL COVER SHEET
E0.2	ELECTRICAL SPECIFICATIONS
E1.1	ELECTRICAL SITE PLAN
E2.1	LIGHTING PLAN
E3.1	POWER PLAN
E5.1	ELECTRICAL SCHEDULES

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REVISION DATE

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Engineer under the laws of the state of Minnesota.

ARNOLD J. HIESERICH, P.E.

03-31-10 (Date) 24439 (License No.)

ELECTRICAL COVER SHEET

COMM. NO.:	10708
SCALE:	AS SHOWN
DATE:	MARCH 29, 2010
DRAWN BY:	DJD

E0.1