ELECTRICAL SYMBOLS LIST

R — EXISTING EQUIPMENT WITH "R" ADJACENT IS TO BE COMPLETELY DISCONNECTED AND REMOVED.

RR — EXISTING EQUIPMENT WITH "RR" ADJACENT IS TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW LOCATION AND RECONNECTED AS REQUIRED.

ER — RELOCATED EQUIPMENT SHOWN IN NEW LOCATION.

—E— EXISTING CONDUIT RUN TO REMAIN. EXISTING CONDUCTORS TO REMAIN UNLESS NOTED OTHERWISE ON DRAWINGS.

—EA— EXISTING CONDUIT RUN TO BE ABANDONED. REMOVE CONDUCTORS AND CAP ENDS OF CONDUIT.

—EX— EXISTING CONDUIT RUN TO BE REWIRED. REFER TO PLANS FOR WIRING REQUIREMENTS.

—R— EXISTING CONDUIT AND WIRE RUN TO BE COMPLETELY DISCONNECTED AND REMOVED BACK TO LAST REMAINING OUTLET OR DEVICE.

—R—X—E— "X" INDICATES APPROXIMATE POINT OF INTERCEPTION OF EXISTING CONDUIT RUN. CONDUIT TO BE REMOVED AT "ER" SIDE OF "X". REMOVE ALL CONDUCTORS PRIOR TO CUTTING CONDUIT. EXACT LOCATION OF ALL CONDUITS SHALL BE FIELD VERIFIED.

——— CONDUIT RUN CONCEALED IN WALLS OR UNDER FLOORS.

– – – – CONDUIT RUN EXPOSED.

— — CONDUIT RUN UNDERGROUND.

CONDUIT STUBBED OUT AND CAPPED. PULL LINE IN PLACE.

—CT— CABLE TRAY PER SPECIFICATION MOUNTED IN CEILING SPACE.

CROSS LINES ON CONDUIT RUNS INDICATE NUMBER OF #12 CURRENT CARRYING CONDUCTORS CONTAINED THEREIN. TWO #12 AND MINIMUM OF ONE #12 GROUND WIRE ARE INDICATED WHEN CROSS LINES ARE NOT SHOWN. NUMERALS ADJACENT TO CROSS LINES ON CONDUIT RUNS INDICATE SIZE OF CONDUCTORS IN LIEU OF #12. ALL CONDUITS SHALL CONTAIN ONE GROUND WERE SIZED PER C.E.C. TABLE 250–95. BUT NOT SMALLER THAN #12. WHERE ISOLATED GROUND RECEPTACLES ARE INDICATED, PROVIDE ADDITIONAL #12 GROUND WIRE IN CONDUIT RUNS, CONNECTED FROM ISOLATED GROUND BUS IN PANEL TO DEVICE, TYPICAL.

B–1,3 — CONDUIT HOMERUN TO PANELBOARD. LETTER AND NUMERALS INDICATE ELECTRICAL PANEL AND CIRCUIT NUMBER.

SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD.

RECESSED BRANCH CIRCUIT PANELBOARD.

PNL — PANEL DESIGNATION.

SURFACE MOUNTED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS.

RECESSED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS.

J — JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR FLUSH IN WALL WITH BLANK COVER PLATE TO MATCH DEVICE PLATES.

J — WALL MOUNTED PULL BOX. REFER TO DRAWINGS FOR SIZES.

J — JUNCTION BOX PEDESTAL TYPE FLOOR MOUNTED.

J — JUNCTION BOX STEM MOUNTED.

M — THREE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER MOTOR. NUMERAL IN PLACE OF "M" INDICATES HORSEPOWER.

100A 3P — MOLDED CASE CIRCUIT BREAKER. "A" INDICATES AMPERE TRIP RATING AND NUMBER OF POLES AS INDICATED. SUBSCRIPT INDICATES TYPE.

NO SUBSCRIPT	THERMAL MAGNETIC
NA	NON–AUTOMATIC
MO	MAGNETIC ONLY
CL	CURRENT LIMITING
SS	SOLID STATE

100AS 90AFU 3P — FUSED SWITCH. "AS" INDICATED AMPERE SWITCH RATING, "AFU" INDICATES AMPERE FUSE RATING, NUMBER OF POLES AS INDICATED.

DRY TYPE TRANSFORMERS. TYPE PER SPEC'S. COPPER WOUND, DRY TYPE, U.O.N.

M — UTILITY METER SOCKET, WITH C.T.'S, CLIPS, ETC., PER SERVING UTILITY COMPANY.

GROUND, "GRD", "GND".

GFI — "GROUND FAULT INTERRUPTER"

CEILING LIGHT FIXTURE AND OUTLET, HID, FLUORESCENT, OR INCANDESCENT, LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED SYMBOL INDICATES FIXTURE WITH EMERGENCY POWER PROVISIONS.

1a — FLUORESCENT LIGHT FIXTURE OUTLET. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE ON EMERGENCY GENERATOR CIRCUIT.

FLUORESCENT STRIP FIXTURE. LOWER CASE LETTER INDICATES CONTROLLING SWITCH. NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.

1a — BRACKET OR WALL MOUNTED SURFACE OR RECESSED LIGHT FIXTURE AND OUTLET, HID, FLUORESCENT OR INCANDESCENT. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.

ILLUMINATED EXIT LIGHT FIXTURE. SIDE, BACK, CEILING, OR PENDANT MOUNTED, SINGLE OR DOUBLE FACED AS NOTED BY SHADED ARC. WITH OR WITHOUT DIRECTIONAL ARROW AS NOTED ON THE DRAWINGS. NOT TO BE USED AS JUNCTION BOX OR "THROUGH–WIRE" DEVICE.

L — LOW LEVEL EXIT LIGHT FIXTURE, WALL MOUNTED WITH OR WITHOUT DIRECTIONAL ARROW AS NOTED ON THE DRAWINGS. BOTTOM OF FIXTURE AT +10 INCHES ABOVE FINISHED FLOOR AND WITHIN FOUR INCHES OF DOOR FRAME WHERE APPLICABLE.

Q 21 106 +9'–0" — LIGHTING FIXTURE IDENTIFICATION SYMBOL. LETTER INDICATES FIXTURE TYPE. NUMERALS IN LOWER HALF OF HEXAGON INDICATE FIXTURE WATTAGE (INCLUDING BALLAST WHERE APPLICABLE). NUMERAL OUTSIDE TOP OF HEXAGON INDICATES NUMBER OF FIXTURES USED FOR LOAD CALCULATIONS. NUMERAL OUTSIDE BOTTOM OF HEXAGON INDICATES MOUNTING HEIGHT FROM FLOOR TO BOTTOM OF FIXTURE. OMISSION OF MOUNTING HEIGHT INDICATES CEILING MOUNTING.

WALL MOUNTED DUAL HEAD EMERGENCY LIGHTING FIXTURE UNIT.

D — INCANDESCENT LIGHTING DIMMER. REFER TO SPECIFICATIONS.

DF — FLUORESCENT LIGHTING DIMMER. REFER TO SPECIFICATIONS.

S — WALL MOUNTED PASSIVE INFRARED OCCUPANCY SENSOR. MOUNT AT +48 INCHES. WATTSTOPPER #WA–100 OR APPROVED EQUAL.

OS — INFRARED/ULTRASONIC DUAL TECHNOLOGY TYPE OCCUPANCY SENSOR COMPLETE WITH ALL POWER SUPPLIES, RELAY PACKS AND CONNECTIONS. WATTSTOPPER DT–200 OR APPROVED EQUAL.

S — SWITCH. LOWER CASE LETTER AT BOTTOM INDICATES OUTLETS CONTROLLED. CAPITAL SUPERSCRIPT INDICATES SWITCH TYPE. MOUNT @ +48" U.N.O.

NO SUPERSCRIPT	–	SINGLE POLE SWITCH
2	–	DOUBLE POLE
3	–	THREE WAY
4	–	FOUR WAY
I	–	ILLUMINATED HANDLE
K	–	KEYED SWITCH
LC	–	LOCKABLE COVER
M	–	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION
MC	–	MOMENTARY CONTACT
P	–	PILOT LIGHT
PR	–	PRESS TYPE
TP	–	THREE POSITION
T	–	TIMER–0–4 HR ROTARY WITH HOLD–ON FEATURE
L	–	LOCKABLE POSITION TOGGLE SWITCH

DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT @ +18" U.N.O. "TV" ADJACENT INDICATES MOUNTING OF RECEPTACLE @ +96". COORDINATE LOCATIONS WITH SIGNAL DRAWINGS. "C" ADJACENT SYMBOL INDICATES DEVICE MOUNTED ON CEILING TYPICAL UNLESS NOTED OTHERWISE.

TWO DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLES IN 3–GANG BOX WITH 2–GANG RING AND PLATE. 20A., 125 VOLT, 2 POLE, 3 WIRE.

DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT @ +18" U.N.O. "WPL" ADJACENT INDICATES WEATHER RESISTANT STAINLESS STEEL LOCKING COVER.

DUPLEX TRANSIENT VOLTAGE SURGE SUPPRESSER RECEPTACLE 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT @ +18" U.N.O.

TWO DUPLEX GROUNDING TYPE RECEPTACLES IN 4S BOX, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. MOUNT @ +18" U.N.O.

FLUSH FLOOR MOUNTED DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE.

PEDESTAL TYPE FLOOR MOUNTED DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE.

IG — ANY RECEPTACLE INDICATED WITH "IG" ADJACENT SHALL BE ISOLATED GROUND TYPE WITH INDIVIDUAL GROUND WIRE TO PANELBOARD.

20 AMP DUPLEX RECEPTACLE IN SPECIAL FLOOR BOX (AMP–557–601–2).

(2) 20 AMP DUPLEX RECEPTACLES IN SPECIAL FLOOR BOX (AMP–557–601–2).

A — SPECIAL PURPOSE OUTLET MOUNTED IN FLUSH WALL BOX. LETTER INDICATES TYPE.

A	–	NEMA TYPE 11–20R (208 VOLT, 3 PHASE, 20 AMP)
B	–	NEMA TYPE 6–20R (208 VOLT, 1 PHASE, 20 AMP)
C	–	NEMA TYPE 6–30R (208 VOLT, 1 PHASE, 30 AMP)
D	–	NEMA TYPE 6–50R (208 VOLT, 1 PHASE, 50 AMP)
E	–	NEMA TYPE 5–30R (120 VOLT, 1 PHASE, 30 AMP)
F	–	NEMA TYPE 11–30R (208 VOLT, 3 PHASE, 30 AMP)
G	–	NEMA TYPE 5–50R (120 VOLT, 1 PHASE, 50 AMP)
H	–	NEMA TYPE L5–20R (120 VOLT, 1 PHASE, 20 AMP TWIST LOCK)
K	–	NEMA TYPE 11–50R (208 VOLT, 3 PHASE, 50 AMP)
L	–	NEMA TYPE 14–30R (120/208 VOLT, 1 PHASE, 30 AMP)
M	–	NEMA TYPE 14–20R (120/208 VOLT, 1 PHASE, 20 AMP)
N	–	NEMA TYPE L6–20R (208 VOLT, 1 PHASE, 20 AMP TWIST LOCK)

100AS — NON–FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING.

100AS 60AFU — FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING. "AFU" INDICATES FUSE AMPERE RATING.

COMBINATION MAGNETIC MOTOR STARTER AND NON–FUSED DISCONNECT SWITCH.

F — COMBINATION MAGNETIC MOTOR STARTER AND FUSED DISCONNECT SWITCH.

COMBINATION MAGNETIC MOTOR STARTER AND CIRCUIT BREAKER.

COMBINATION MAGNETIC MOTOR STARTER AND MOTOR CIRCUIT PROTECTOR.

SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER MOTOR.

T — THERMOSTAT OUTLET. MOUNT AT +48" UNLESS OTHERWISE NOTED. SEE MECHANICAL DRAWINGS.

—WM— SURFACE NON–METAL RACEWAY FOR COMMUNICATIONS (AND POWER WHERE CALLED FOR ON DRAWINGS). REFER TO WIREMOLD 5400 SERIES, WITH ALL OFFSETS, ANCHORING ATTACHMENTS, ENDCAPS, ETC. REQUIRED FOR A COMPLETE INSTALLATION.

—T— VOICE SYSTEM CONDUIT RUN. NUMERAL ADJACENT TO "T" INDICATES QUANTITY OF 4 PAIR UTP CAT.5 CABLES IN RUN. PROVIDE 1" CONDUIT FOR 1–8 PAIRS OF CABLE AND 1 1/2" CONDUIT FOR 9–16 PAIRS OF CABLE.

TELEPHONE OUTLET AND HANDSET WITH RJ–45 JACK. MOUNT AT +18" TO CENTER UNLESS OTHERWISE NOTED. "W" ADJACENT INDICATES WALL MOUNTED AT +48" TO CENTER. "2" DENOTES DUPLEX OUTLET. "P" DENOTES PUBLIC TELEPHONE OUTLET MOUNTED AT +48".

—CD— DATA SYSTEM CONDUIT RUN. NUMERAL ADJACENT TO "CD" INDICATES QUANTITY OF CAT 5E 4 PAIR UTP CABLES IN RUN. 1" CONDUIT FOR 1–8, 4 PAIR CABLES AND 1 1/2" CONDUIT FOR 9–16, 4 PAIR CABLES.

DATA OUTLET SYMBOL INDICATES (1) RJ45 JACK. NUMERAL ADJACENT INDICATES QUANTITY OF CAT 6 JACKS AND QUANTITY OF 4 PAIR CAT 6 CABLES BACK TO IDF.

RATED RJ–45 JACK IN SPECIAL FLOOR BOX.

DATA/VOICE OUTLET SYMBOL INDICATES (2) JACKS ((1) CAT 5E JACK FOR VOICE CABLING BACK TO IDF AND (1) CAT 6 JACK AND CABLING BACK TO IDF. ENGRAVE PLATE "VOICE" AND "DATA" OVER RESPECTIVE JACKS. PROVIDE TELEPHONE HANDSET.

FLUSH FLOOR MOUNTED COMBINATION VOICE/DATA OUTLET WITH RJ–45 JACKS IN SPECIAL FLOOR BOX PER SPEC'S. PROVIDE TELEPHONE HANDSET.

PB — VOICE/DATA PULL BOX MOUNTED IN ACCESSIBLE CEILING SPACE. MINIMUM 12"x12"x6"D WITH SCREWED ON COVER UNLESS NOTED OTHERWISE.

VGA — COMBINATION SVGA OUTLET AND (2) RCA JACK OUTLETS.

—T/CD— VOICE/DATA SYSTEM CONDUIT RUN. NUMERAL ADJACENT TO "T/CD" INDICATES QUANTITY OF CAT 5 AND CAT 5E 4 PAIR UTP CABLES IN RUN. 1" CONDUIT FOR 1–8, 4 PAIR CABLES AND 1 1/2" CONDUIT FOR 9–16, 4 PAIR CABLES. 4" CONDUIT WITH INNERDUCT FOR TELEPHONE CABLE AND FIBER OPTIC FOR OUTSIDE INSTALLATION. REFER TO SITE PLAN.

—TV— MASTER ANTENNA TV SYSTEM COAX CABLE IN CONDUIT. 3/4"C MINIMUM. "TV1" INDICATES ONE INCH CONDUIT. REFER TO SPECIFICATIONS FOR REQUIRED CABLE.

—VGA— 1"C. WITH (1) SVGA–VIDEO CABLE AND (2) 22GA. TSP AUDIO CABLE.

1 — CEILING MOUNTED BATTERY POWERED GPS CONTROLLED CLOCK (PRIMEX#14155) MOUNT AT +96" INCHES ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDE 4S BOX AND 3/4"C. STUBBED UP INTO CEILING SPACE.

K — DIGITAL KEY PAD FOR SECURITY SYSTEM. MOUNT AT +48" ON CENTER. REFER TO SPECIFICATIONS. FIELD COORDINATE LOCATION WITH SCHOOL DISTRICT PRIOR TO ROUGH IN "WP" ADJACENT – PROVIDE KEYPAD IN NEMA 3R ENCLOSURE 8"H x 6"W x 4"D, LOCKABLE HINGED COVER CIRCLE AW #684RHC & #N86P OR EQUAL.

INTRUSION DETECTION DOOR SWITCH. CONCEALED IN DOOR FRAME. REFER TO SPECIFICATIONS. ROUTE WIRING THROUGH STEEL DOOR FRAME.

GB — GLASS BREAK DETECTOR MOUNTED 2'–0" FROM WINDOW CEILING MOUNTED.

—SI— SECURITY/INTRUSION SYSTEM CONDUIT. RUN 3/4" CONDUIT MINIMUM. "SI1" INDICATES ONE INCH CONDUIT. REFER TO SPECIFICATIONS FOR REQUIRED WIRING.

SECURITY SYSTEM PASSIVE INFRARED MOTION DETECTOR. REFER TO SPECIFICATIONS. CEILING MOUNTED PER MANUFACTURER'S REQUIREMENTS.

W S — FLUSH CEILING MOUNTED SPEAKER, GRILL, BACKBOX, & HANGER. SEE SPECIFICATIONS. "W" ADJACENT INDICATES WALL MOUNTED TYPE SPEAKER. PROVIDE INTEGRAL VOLUME CONTROL WITH WALL MOUNTED SPEAKERS.

P — RECESSED EXTERIOR WEATHERPROOF SPEAKER BACKBOX & VANDAL RESISTANT GRILL "P" ADJACENT INDICATES PROJECTION TYPE SPEAKER.

—S1— 3/4"C. MINIMUM & WIRING FOR PUBLIC ADDRESS/CLASS PASS SYSTEM. "S1" INDICATES QUANTITY OF SYSTEM CABLE PAIRS CONTAINED THEREIN. REFER TO SPECIFICATIONS FOR CABLE REQUIREMENTS.

VC — VOLUME CONTROL. MOUNT AT +48" UNLESS NOTED OTHERWISE.

VCR — VIDEO CASSETE RECORDER SIGNAL AND POWER OUTLET WITH DUAL CABLE CONNECTIONS ENGRAVED "SIGNAL IN" AND "TO TV". COMPLETE WITH DUPLEX 120 VOLT RECEPTACLE CONNECTED TO NEAREST CIRCUIT OR AS INDICATED ON DRAWINGS. MOUNT AT +18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE ON DRAWINGS.

C TV — MASTER TELEVISION ANTENNA SYSTEM SIGNAL AND POWER OUTLET. MOUNT AT +18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE ON DRAWINGS. CONNECT RECEPTACLE AS INDICATED ON DRAWINGS. "C" INDICATES CEILING MOUNTED.

MC — MICROPHONE OUTLET WITH PROPER CONNECTOR.

MC — FLOOR MICROPHONE OUTLET WITH PROPER CONNECTOR.

NOTE:

ALL THE SYMBOLS SHOWN HERE ARE NOT NECESSARILY USED ON THIS PROJECT.

STRUCTURAL NOTE

UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, NEITHER DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.

SCHOOL EQUIPMENT ANCHORAGE NOTE

EQUIPMENT ANCHORAGE

THE SEISMIC ANCHORAGE OF ELECTRICAL EQUIPMENT SHALL CONFORM TO C.C.R. TITLE 24.

A) THE SEISMIC ANCHORAGE OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE DESIGNED TO WITHSTAND A LATERAL FORCE:

1) CALCULATED AS SPECIFIED IN SECTION 1632A AND TABLE 16A–O OF THE VOL. 2, TITLE 24, 2001 CBC.

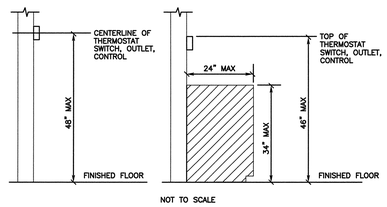
2) IN LIEU OF CALCULATIONS PER 1 – THE ANCHORAGE SHALL BE CAPABLE OF WITHSTANDING A LATERAL FORCE EQUAL TO TO 2.2 WP ACTING SIMULTANEOUSLY WITH A VERTICAL FORCE *EQUAL TO 0.72 WP (BOTH FORCES AT SERVICE LEVEL. THESE VALUES CORRESPOND TO AN IP = 1.15 AND CA = 0.66 FOR OTHER VALUES OF IP AND CA, THE VERTICAL AND LATERAL FORCE CAN BE ADJUSTED ACCORDINGLY.)

* INCLUSION OF VERTICAL FORCE PER TABLE 16–O FOOTNOTE 20 (FOR EMERGENCY POWER SUPPLIES AND COMMUNICATIONS EQUIPMENT ONLY)

B) THE CAPACITY OF THE ANCHORAGE CONNECTORS IN SHEAR AND/OR TENSION SHALL BE CLEARLY INDICATED IN THE CALCULATIONS, WHICH INDICATE, ICBO REPORT NO. (IF APPLICABLE) THEIR TOTAL NUMBER, SIZE, GRADE, EMBEDMENT, EDGE DISTANCES, AND OTHER FACTORS WHICH AFFECT THE CAPACITY IN SHEAR AND TENSION.

ALL CONDUITS SHALL BE SUPPORTED AND BRACED IN ACCORDANCE WITH SMACNA GUIDELINES AND AS APPROVED BY DSA.

MOUNTING HEIGHT OVER OBSTRUCTION



NOT TO SCALE

ABBREVIATIONS LIST

AF	AMPERE FRAME RATING OF CIRCUIT BREAKERS
AFF	ABOVE FINISHED FLOOR
AFU	AMPERE FUSE RATING
AIC	AMPS INTERRUPTED CAPACITY RATING (RMS SYMMETRICAL MINIMUM)
AM	AMMETER
AMP, A	AMPERES
APPR	APPROVED
AS	AMPERE SWITCH RATING
AT	AMPERE TRIP RATING OR BREAKER
AUTO	AUTOMATIC
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BRD, BD	BOARD
BFC	BELOW FINISHED CEILING
BKR	BREAKER
C	CONDUIT
CAB	CABINET
CC	CENTER TO CENTER
cd	CANDELA
CHLOR	CHLORINE, CHLORINATION
CKT	CIRCUIT
CMH	COMMUNICATION MANHOLE
C.O.	CONDUIT ONLY
COMPT	COMPARTMENT
COMPR	COMPRESSOR
CPB	COMMUNICATION PULLBOX
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY (MAGNETICALLY HELD U.N.O.)
CSFM	CALIFORNIA STATE FIRE MARSHALL
CTC	COMMUNICATION TERMINAL CABINET
CT	CURRENT TRANSFORMER
CU	COPPER
DISC.	DISCONNECT
DISTR	DISTRIBUTION
DWG	DRAWING
ELEV	ELEVATION
EMERG	EMERGENCY
ENCL	ENCLOSURE
EQPT	EQUIPMENT
EXH	EXHAUST
E	EXISTING
FAA	FIRE ALARM ANNUNCIATOR
FDR	FEEDER
FF	FINISHED FLOOR
FG	FINISHED GRADE
FS	FLOW SWITCH
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FUT	FUTURE
FUP	FUSE, CPT PRIMARY
FUS	FUSE, CPT SECONDARY
GND, GRD	GROUND
HH	HAND HOLE
HOA	HAND–OFF–AUTOMATIC
HTR	HEATER
HZ	HERTZ
IDF	INTERMEDIATE DISTRIBUTION FRAME
ICPB	INTERCEPT COMMUNICATION PULLBOX
INC	INCANDESCENT
IND	INDICATION
INSTR	INSTRUMENT
IPPB	INTERCEPT POWER PULLBOX
ISC	SHORT CIRCUIT CURRENT
J.B.	JUNCTION BOX
K	THOUSAND (KILO)
KV	KILOVOLTS
KW	KILOWATTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KWH	KILOWATT HOURS
KWHD	KILOWATT HOUR DEMAND METER
LOS	PUSS BUTTON WITH "LOCK–OUT–STOP"
LS	LIMIT SWITCH
LT, LTS	LIGHT, LIGHTS
LTG	LIGHTING
MA	MILLIAMPS
MAN	MANUAL
MAG	MAGNETIC
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MILS
MCP	MOTOR CIRCUIT PROTECTOR
MDF	MAIN DISTRIBUTION FRAME
MH	MANHOLE
MS	MANUAL MOTOR STARTER
MIN	MINUTES, MINIMUM
MOV	MOTOR OPERATED VALVE, METAL OXIDE VARISTER
MT, MTD, MTG	MOUNT, MOUNTED, MOUNTING
NO, NOS	NUMBER, NUMBERS
NP	NAMEPLATE
NTS	NOT TO SCALE
OC	ON CENTER
OL	OVERLOAD
PB	PULLBOX
PIV	POST INDICATOR VALVE
PMH	POWER MANHOLE
PNL	PANEL
PNLBD	PANELBOARD
POS	POSITION
PPB	POWER PULLBOX
PRI	PRIMARY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PW	PART WINDING
PWR	POWER
REC	RECEPTACLE
RECPTS	RECEPTACLES
REQD	REQUIRED
SA	STATUS ANNUNCIATOR
SCH	SCHEDULE
SEC	SECONDS, SECONDARY
SECT	SECTION
SEL SW	SELECTOR SWITCH
SEQ	SEQUENCE
SHLD	SHIELDED
SHT	SHEET
SIG	SIGNAL
SM	START CONTACTOR COIL
SPECS	SPECIFICATIONS
SP HTR	SPACE HEATER
ST	SHUNT TRIP
STA	STATION
STD	STANDARD
STL	STEEL
STR	STARTER
SV	SOLENOID VALVE
SW	SWITCH
SYS	SYSTEM
TACH	TACHOMETER
TDOD	TIME DELAY ON DE–ENERGIZATION
TDOE	TIME DELAY ON ENERGIZATION
TEMP	TEMPERATURE
TERM	TERMINAL
THERM	THERMOSTAT
TR	TIME DELAY RELAY
TS	TAMPER SWITCH
TSP	TWISTED SHIELDED PAIR
TSTAT	THERMOSTAT
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UGPS	UNDERGROUND PULL SECTION
VFD	VARIABLE FREQUENCY DRIVE
V	VOLTS
VM	VOLTMETER
VS	VOLTMETER SWITCH
W	WATTS
WHM	WATT HOUR METER
WP	WEATHERPROOF
WPL	WEATHERPROOF LOCKING
XFMR	TRANSFORMER
XMTR	TRANSMITTER

ELECTRICAL SHEET INDEX

SHEET	DESCRIPTION	SCALE
E–0.1	ELECTRICAL SYMBOL LIST & ABBREVIATIONS LIST	NO SCALE
E–0.2	GENERAL NOTES	NO SCALE
E–0.3	LIGHTING FIXTURE SCHEDULE	NO SCALE
E–0.4	SINGLE LINE DIAGRAM	NO SCALE
E–1.3	FIRE ALARM SITE PLAN	1"=30'–0"
EA–2.1	BUILDING "A" LIGHTING PLAN – WEST	1/8"=1'–0"
EA–2.2	BUILDING "A" LIGHTING PLAN – EAST	1/8"=1'–0"
EA–2.3	BUILDING "A" POWER PLAN – WEST	1/8"=1'–0"
EA–2.4	BUILDING "A" POWER PLAN – EAST	1/8"=1'–0"
EA–2.5	BUILDING "A" COMMUNICATION PLAN – WEST	1/8"=1'–0"
EA–2.6	BUILDING "A" COMMUNICATION PLAN – EAST	1/8"=1'–0"
EA–2.7	BUILDING "A" FIRE ALARM PLAN – WEST	1/8"=1'–0"
EA–2.8	BUILDING "A" FIRE ALARM PLAN – EAST	1/8"=1'–0"
EB–2.0	DEMOLITION LIGHTING PLAN "B" WING	1/8"=1'–0"
EB–2.1	REMODELED LIGHTING PLAN "B" WING	1/8"=1'–0"
EB–2.2	REMODELED POWER PLAN "B" WING	1/8"=1'–0"
EB–2.3	REMODELED COMMUNICATION PLAN "B" WING	1/8"=1'–0"
EB–2.4	REMODELED FIRE ALARM PLAN "B" WING	1/8"=1'–0"
EC–2.0	DEMOLITION LIGHTING PLAN "C" WING	1/8"=1'–0"
EC–2.1	REMODELED LIGHTING PLAN "C" WING	1/8"=1'–0"
EC–2.2	REMODELED POWER PLAN "C" WING	1/8"=1'–0"
EC–2.3	REMODELED COMMUNICATION PLAN "C" WING	1/8"=1'–0"
EC–2.4	REMODELED FIRE ALARM PLAN "C" WING	1/8"=1'–0"
E–3.1	FIRE ALARM LEGEND AND GENERAL NOTES	NO SCALE
E–3.2	FIRE ALARM WIRING DIAGRAM DETAILS	NO SCALE
E–3.3	FIRE ALARM RISER DIAGRAM	NO SCALE
E–3.4	FIRE ALARM CALCULATIONS	NO SCALE
E–4.1	ELECTRICAL DETAILS	NO SCALE
E–5.1	PANEL SCHEDULES	NO SCALE

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KEY PLAN

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04-106133
AC___ FLS___ SS___
DATE___

PROJECT TITLE

SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT
777 NORTH "F" STREET
SAN BERNARDINO, CA. 92410

RAMONA-ALESSANDRO ELEMENTARY SCHOOL
MODERNIZATION
670 RAMONA AVENUE
SAN BERNARDINO, CA 92411

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NO.	REVISIONS	DATE	NO.	REVISIONS	DATE
1	DSA ADDENDUM NO. 1	2/10/10			

DRAWING TITLE

ELECTRICAL SYMBOL LIST & ABBREVIATIONS LIST

ARCHITECT SEAL

DESIGNED BM	PROJECT NO. 3137117
DRAWN RL	SCALE NO SCALE
CHECKED JJR	DRAWING NO. E-0.1
DATE 19 MAR 2004	

DCGA #20-03142

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" BID ISSUANCE SET"