ABBREVIATIONS

A	AMPERE(S)
AC	ALTERNATING CURRENT
ACU	AIR CONDITIONING UNIT
AF	AMPERES FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPERES INTERRUPTING CAPACITY
ARCH	ARCHITECTURAL
AT	AMPERES TRIP
ATC	AUTOMATIC TEMPERATURE CONTROL
AWG	AMERICAN WIRE GAGE
A/V	AUDIOVISUAL
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CT	CURRENT TRANSFORMER
CX	CONNECT TO EXISTING
DC	DIRECT CURRENT
DESIG	DESIGNATION
DN	DOWN
DWG	DRAWING
DX	DISCONNECT EXISTING
EA	EACH
EC	EMPTY CONDUIT
ECB	ENCLOSED CIRCUIT BREAKER
EF	EXHAUST FAN
EH	ELECTRIC HEATER
ELEC	ELECTRIC
EMH	ELECTRIC MANHOLE
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXISTING
F	FUSE
FDAS	FIRE DETECTION AND ALARM SYSTEM
FDR	FEEDER
FLA	FULL LOAD AMPERE(S)
FMC	FLEXIBLE METAL CONDUIT
FS	FUSIBLE SWITCH
FT	FOOT OR FEET
FVNR	FULL VOLTAGE NONREVERSING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT(S)
KVA	KILOVOLT-AMPERES
KW	KILOWATT(S)
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LTG	LIGHTING
MAFC	MAKE ALL FINAL CONNECTIONS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MH	MOUNTING HEIGHT (TO CENTERLINE OF DEVICE, UNLESS NOTED)
MLO	MAIN LUG ONLY
MOA	MULTIOUTLET ASSEMBLY
MS	MANUAL SWITCH
MTD	MOUNTED
MV	MEDIUM VOLTAGE
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFS	NONFUSIBLE SWITCH
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OL	OVERLOAD
P	POLE(S)
PH	PHASE
PNL	PANEL
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECEPT	RECEPTACLE(S)
REQ'D	REQUIRED
RF	RETURN FAN
RMC	RIGID METAL CONDUIT
RM(S)	ROOM(S)
RVAT	REDUCED VOLTAGE AUTOTRANSFORMER
RX	REMOVE EXISTING
SF	SUPPLY FAN
SMR	SURFACE METAL RACEWAY
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TA	TRIP AMPERES
TTB	TELEPHONE TERMINAL BOARD
TTC	TELEPHONE TERMINAL CABINET
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	VOLT-AMPERES
VFC	VARIABLE FREQUENCY CONTROLLER
W	WIRE
W/	WITH
WP	WEATHERPROOF
XFMR	TRANSFORMER

SYMBOLS

LIGHTING

- S_{XX} — SINGLE POLE SWITCH MOUNTED 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED
  SUBSCRIPTS AS FOLLOWS:
  3 - THREE WAY SWITCH
  4 - FOUR WAY SWITCH
  D - DIMMER SWITCH
  P - SWITCH WITH PILOT LIGHT
  K - KEY-OPERATED SWITCH
  T - TIME SWITCH
  WP - SWITCH WITH WEATHERPROOF COVER
  OS - OCCUPANCY SENSOR
  a - LOWER CASE LETTER INDICATES SWITCH LEG
- FLUORESCENT LIGHTING FIXTURE
- FLUORESCENT LIGHTING FIXTURE, PENDANT MOUNTED
- FLUORESCENT LIGHTING FIXTURE, WALL-MOUNTED
- INDUSTRIAL FLUORESCENT LIGHTING FIXTURE
- LIGHTING TRACK
- LIGHTING FIXTURE, TRACK-MOUNTED
- INCANDESCENT, COMPACT FLUORESCENT, OR HID LIGHTING FIXTURE, CEILING-MOUNTED
- INCANDESCENT, COMPACT FLUORESCENT OR HID LIGHTING FIXTURE, WALL-MOUNTED
- INCANDESCENT OR COMPACT FLUORESCENT WALL WASHER
- INCANDESCENT OR COMPACT FLUORESCENT DECORATIVE LIGHTING FIXTURE, PENDANT-MOUNTED
- INCANDESCENT OR COMPACT FLUORESCENT DECORATIVE LIGHTING FIXTURE, SURFACE-MOUNTED
- EXIT SIGN - BACK-MOUNTED WITH DIRECTIONAL ARROWS AS INDICATED
- EXIT SIGN - TOP- OR PENDANT-MOUNTED, SINGLE FACE WITH DIRECTIONAL ARROWS AS INDICATED
- EXIT SIGN - TOP- OR PENDANT-MOUNTED, DOUBLE FACE WITH DIRECTIONAL ARROWS AS INDICATED
- EMERGENCY LIGHTING UNIT
- OS — OCCUPANCY SENSOR, CEILING MOUNTED - ARROWS INDICATE DIRECTION OF SENSOR BEAM AIMING
- OS — OCCUPANCY SENSOR, WALL MOUNTED - ARROW INDICATES DIRECTION OF SENSOR BEAM AIMING
- PC — PHOTOELECTRIC CONTROL SWITCH
- TC — TIME CLOCK
- C — CONTACTOR

POWER (FLOOR PLANS)

- SINGLE RECEPTACLE MOUNTED 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED
- ϕ^{XX}_{YY} — DUPLEX RECEPTACLE MOUNTED 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED
  SUBSCRIPTS AS FOLLOWS:
  E - CONNECTED TO EMERGENCY CIRCUIT
  G - GROUND FAULT CIRCUIT INTERRUPTER TYPE
  IG - ISOLATED GROUND
  WC - WATER COOLER
  WP - WEATHERPROOF
  64" - MOUNTING HEIGHT AS INDICATED
- RECEPTACLE MOUNTED IN PEDESTAL
- DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER 6" ABOVE BACKSPLASH
- DOUBLE DUPLEX RECEPTACLE MOUNTED 18" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED
- L6-30R — SPECIAL RECEPTACLE MOUNTED 18" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED (NEMA CONFIGURATION AS INDICATED)
- SINGLE RECEPTACLE MOUNTED IN FLOOR
- DUPLEX RECEPTACLE MOUNTED IN FLOOR
- DOUBLE DUPLEX RECEPTACLE MOUNTED IN FLOOR
- DUPLEX RECEPTACLE MOUNTED IN CEILING
- CLOCK HANGER OUTLET MOUNTED 90" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED
- 5 7 — MULTIOUTLET ASSEMBLY, DARK SQUARES INDICATE NEMA 5-20R DUPLEX RECEPTACLE, SPACING AS INDICATED ON DRAWINGS. NUMBER INDICATES CIRCUIT.
- 208Y/120V PANELBOARD (SURFACE MOUNTED)
- 208Y/120V PANELBOARD (FLUSH MOUNTED)
- 480Y/277V PANELBOARD (SURFACE MOUNTED)
- 480Y/277V PANELBOARD (FLUSH MOUNTED)
- JUNCTION BOX
- H — HEATER CONNECTION
- G — ENGINE GENERATOR SET
- M — MOTOR CONNECTION
- PUSHBUTTON
- NONFUSIBLE SWITCH
- FUSIBLE SWITCH
- MAGNETIC MOTOR STARTER
- COMBINATION MAGNETIC MOTOR STARTER
- ENCLOSED CIRCUIT BREAKER
- T — TRANSFORMER
- VFC — VARIABLE FREQUENCY CONTROLLER
- GROUND ROD
- $\$_{FS}$ — MANUAL MOTOR STARTER
- UNDERGROUND DUCTBANK

FIRE DETECTION & ALARM SYSTEM

- S_D — SMOKE DETECTOR
  I - IONIZATION
  P - PHOTOELECTRIC
  BT - BEAM TRANSMITTER
  BR - BEAM RECEIVER
- DUCT SMOKE DETECTOR
- $H_{R/F}$ — HEAT DETECTOR
  R/F - COMBINATION RATE OF RISE AND FIXED TEMPERATURE
  R/C - RATE COMPENSATION
  F - FIXED TEMPERATURE
  R - RATE OF RISE
- P — MANUAL PULL STATION MOUNTED 48" ABOVE FINISHED FLOOR
- AUDIBLE DEVICE MOUNTED 6" BELOW CEILING OR 90" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER
- S_S — STROBE LIGHT MTD 6" BELOW CEILING OR 80" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER (SUBSCRIPTED NUMBER INDICATES MINIMUM LUMINOUS INTENSITY OF STROBE LIGHT IN CANDELAS)
- S_C — COMBINATION AUDIBLE DEVICE AND STROBE LIGHT MOUNTED 6" BELOW CEILING OR 80" ABOVE FINISHED FLOOR, WHICHEVER IS LOWER (SUBSCRIPTED NUMBER INDICATES MINIMUM LUMINOUS INTENSITY OF STROBE LIGHT IN CANDELAS)
- FLOW SWITCH CONNECTION
- VALVE WITH TAMPER SWITCH CONNECTION
- PRESSURE SWITCH CONNECTION
- MAGNETIC DOOR HOLDER
- SD — SMOKE DAMPER
- CD — COMBINATION FIRE & SMOKE DAMPER

MISCELLANEOUS BOXES AND DEVICES
FCP - FIRE ALARM CONTROL PANEL
FAP - FIRE SYSTEM ANNUNCIATOR PANEL
ESR - ELEVATOR STATUS/RECALL
FPS - FIRE PUMP STATUS
EGS - EMERGENCY GENERATOR STATUS

SECURITY SYSTEM

- CR — CARD READER - REFER TO DETAIL D/E-301 FOR CONDUIT & BOX REQUIREMENTS
- CAMERA - CEILING MOUNTED. PROVIDE SINGLE-GANG BOX & (1)¾"C TO NEAREST SECTION OF CABLE TRAY.
- CAMERA - WALL MOUNTED 10'-0"AFF. PROVIDE SINGLE-GANG BOX & (1)¾"C TO NEAREST SECTION OF CABLE TRAY.

POWER (ONE LINE)

- GROUND
- TRANSFORMER
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- STATIONARY CIRCUIT BREAKER
- DRAW-OUT CIRCUIT BREAKER
- SHUNT-TRIP CIRCUIT BREAKER
- NETWORK PROTECTOR
- FUSE
- DISCONNECT SWITCH
- THERMAL OVERLOADS
- CONTACTS
- METER
- TRANSFER SWITCH
- LIGHTNING ARRESTOR
- KEY OPERATED MECHANICAL INTERLOCK
- FUSED CUTOUT
- FUSED DISCONNECT SWITCH

DRAWING CONVENTIONS

SYMBOL	DESCRIPTION
	POINT OF CONNECTION, NEW TO EXISTING
	DEMOLITION WORK TERMINATION POINT
X	INDICATES FEEDER NUMBER INDICATES FEEDER DESIGNATION. REFER TO FEEDER SCHEDULE FOR CONDUCTOR AND CONDUIT SIZE.
X	INDICATES SPECIAL NOTE NUMBER INDICATES SPECIAL NOTE DESIGNATION. REFER TO SPECIAL NOTE LIST ON DRAWING FOR DESCRIPTION OF ITEM
XX	LIGHTING FIXTURE SWITCH DESIGNATION LIGHTING FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE
Ø	DIAGONAL LINE INDICATES EMERGENCY LIGHTING FIXTURE
1 E1	INDICATES DIRECTION OF CUTTING PLANE NUMBER OR LETTER INDICATES SECTION OR ELEVATION DRAWING NUMBER WHERE ELEVATION OR SECTION IS TAKEN OR DRAWN
XXX/X.X	INDICATES PANELBOARD OR MOTOR CONTROL CENTER DESIGNATION AND CIRCUIT NUMBER
#8	BRANCH CIRCUIT HOMERUN; ARROWHEADS INDICATE NUMBER OF CIRCUITS INDICATES WIRE SIZE (AWG OR CIRCULAR MILS) IF OTHER THAN #12
G	SHORT CROSSHATCH LINES INDICATE PHASE CONDUCTORS (#12 UNLESS OTHERWISE NOTED) LONG CROSSHATCH LINE INDICATES NEUTRAL CONDUCTOR (#12 UNLESS OTHERWISE NOTED) LONG CROSSHATCH LINE WITH DOT AT THE END INDICATES GROUNDING CONDUCTOR (#12 UNLESS OTHERWISE NOTED) CIRCUIT WITHOUT CROSSHATCH LINES INDICATES 3#12 IN 3/4" C
H G A	DESIGNATION OF PANEL OR EQUIPMENT G = GROUND FLOOR 2 = SECOND FLOOR H = 480Y/277V PANEL R = 208Y/120V PANEL D = DIMMING PANEL L = LIGHTING CONTROL SWITCHING PANEL T = TRANSFORMER
	CONDUIT RUN CONCEALED IN WALL OR CEILING IN FINISHED AREAS, EXPOSED IN UNFINISHED AREAS (3#12 IN ¾" C UNLESS OTHERWISE NOTED)
	CONDUIT UNDERGROUND OR CONCEALED IN SLAB (3#12 IN ¾" C UNLESS OTHERWISE NOTED)
	CONDUIT UP
	CONDUIT DOWN
	HEAVY LINE WEIGHT DESIGNATES NEW WORK ON NEW WORK PLANS, REMOVAL WORK ON DEMOLITION PLANS.
	LIGHT LINE WEIGHT DESIGNATES EXISTING WORK TO REMAIN.

REVISION	DATE	REVISION	DATE

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ISSUED FOR	DATE
SD – ESTIMATING SET	25 MAY 05
SCHEMATIC DESIGN SET	07 JUN 05
DD – ESTIMATING SET	29 JUL 05
DESIGN DEVELOPMENT SET	09 AUG 05
EARLY BID PACKAGE	08 SEPT 05
50% CD ESTIMATING SET	22 SEPT 05

ISSUED FOR	DATE
CONST. SET/OWNER REVIEW	06 DEC 05
BID SET	20 DEC 05

Electrical Legend

DATE: 20 DEC 05
SCALE: NONE

E-001

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