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PROJECT NAME

Cafe Express

Cafe Express Restaurant

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3800 SW, Freeway, Suite 124
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PROJECT NUMBER

11039

SHEET NAME

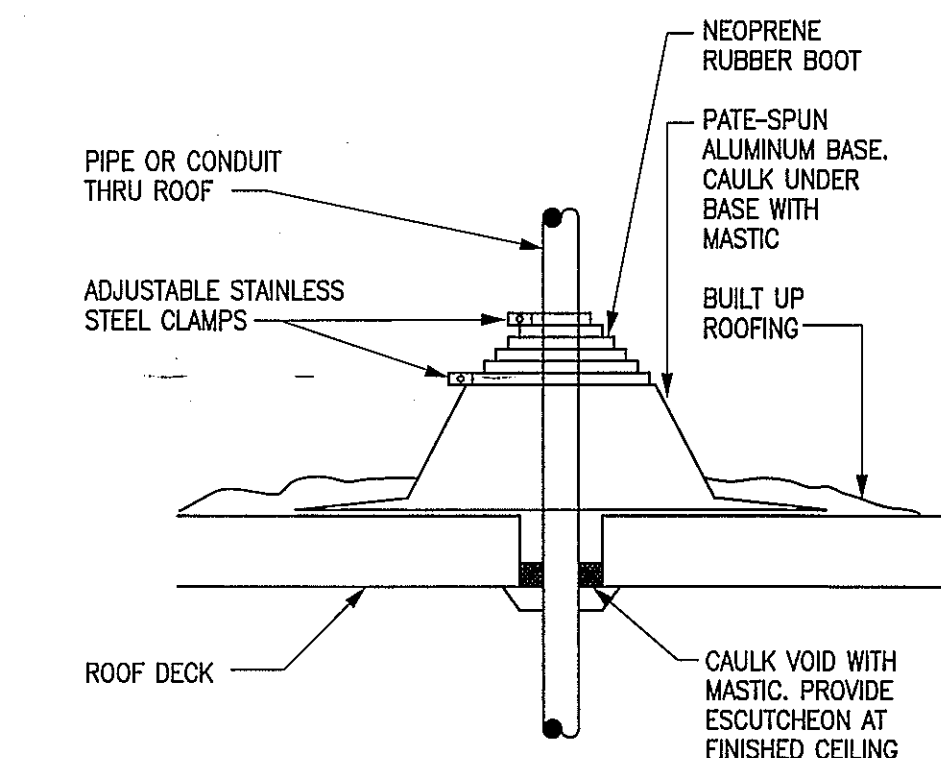
ELECTRICAL
DETAILS & SPEC'S

SHEET NUMBER

E4.1

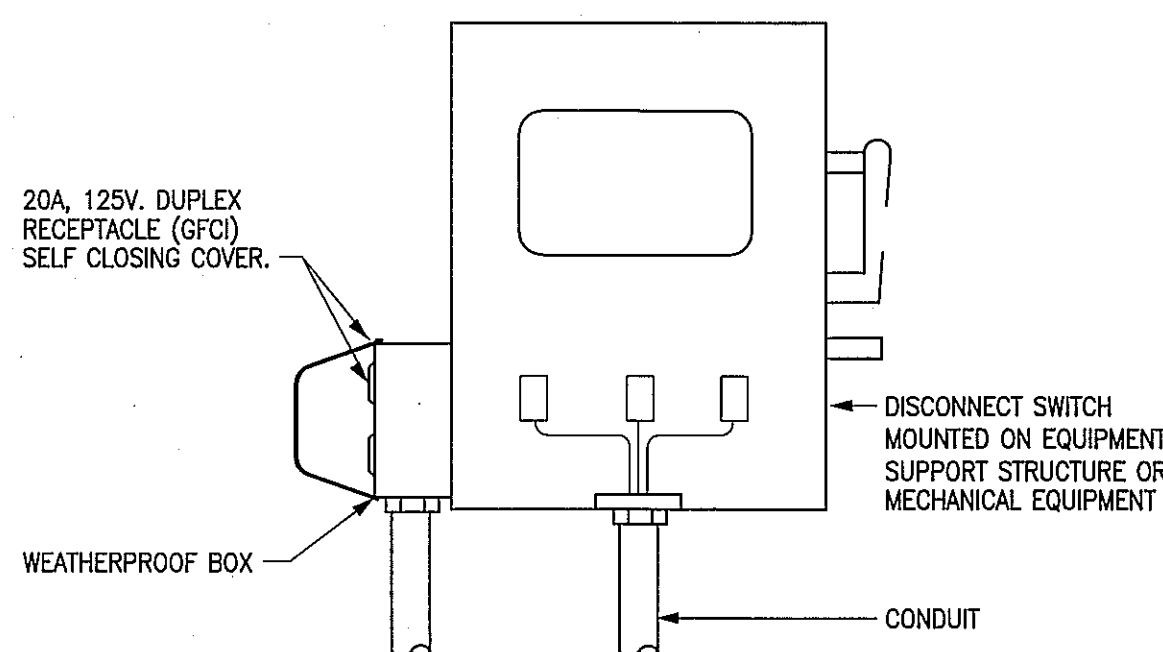
LIGHTING FIXTURE SCHEDULE

MARK	WATS PER FIXT.	NO. OF FIXT.	MANUFACTURER AND CATALOG NUMBER	MOUNTING	LAMPS		VOLTS	REMARKS
					NO.	TYPE		
A1	115	-	LITHONIA #2SRIC432PWA12129/120GE10PS1/3-A268	RECESSED (GRID)	4	F032XP/ 835/ECO 35K	120	2'x4', 4-LAMP FLUORESCENT CLEAN-ROOM LAY-IN WITH .125" THICK ACRYLIC LENS.
A1E	115	-	LITHONIA #2SRIC432PWA12129/120GE10PS1/3-EL14-A268	RECESSED (GRID)	4	F032XP/ 835/ECO 35K	120	SAME AS TYPE "A1" EXCEPT WITH A 1400 LUMEN EMERGENCY BACK-UP BATTERY W/90 MINUTES OF EMERGENCY BACK-UP.
B	50	-	CON-TECH HOUSING: #LVR316-120 TRIM: #CTR303N-P	RECESSED	1	50W MR16 NARROW 10" BEAM	120	LOW-VOLTAGE RECESSED PINHOLE LIGHT WITH NARROW BEAM SPREAD LAMP. (ROUND)
C	50	-	CON-TECH HOUSING: #LVR316-120 TRIM: #CTR324-P	RECESSED	1	50W MR16 NARROW 10" BEAM	120	LOW-VOLTAGE RECESSED FULLY ADJUSTABLE WALL WASHER LIGHT WITH NARROW BEAM SPREAD LAMP.
D1	3	-	CON-TECH "ORCHARD FIELD GLASS" PENDANT: #RLMAC1596 SHADE: #OF8103-MANGO SUNSET	PENDANT	1	3W LED	120	GRAVITY FIT LINE-VOLTAGE MONOPOINT PENDANT LIGHT WITH NARROW BEAM SPREAD LAMP.
EM	-	-	CON-TECH #EL2H45W-A268	WALL	2	9W KRYPTON	120	WHITE THERMOPLASTIC EMERGENCY LIGHTING UNIT WITH 90 MIN. OF BATTERY BACK-UP. MOUNT UNIT 6" BELOW CLG. UNLESS OTHERWISE NOTED.
F	-	-	TO BE SELECTED BY ARCHITECT AND PROVIDED BY CONTRACTOR	-	-	-	120	-
G	3	-	CON-TECH "ROCK COTTAGE GLASS" PENDANT: # SHADE: #RCG569-TORTOISE SHELL	PENDANT	1	3W LED	120	GRAVITY FIT LINE-VOLTAGE MONOPOINT PENDANT WITH BLOWN GLASS SHADE.
H	24	-	LBL #PW-561-BOP-CF-1HE	WALL	1	24W COMPACT FLUORESCENT 2G11	120	WALL SCONCE WITH OPAL BUBBLE GLASS. VERIFY MOUNTING HEIGHT WITH ARCHITECT.
J	50	-	CON-TECH HOUSING: #LVR316-120 TRIM: #CTR312-P	RECESSED	1	50W MR16	120	LOW-VOLTAGE RECESSED DOWNLIGHT WITH FLAT ETCHED GLASS LENS.
K1	17	-	LITHONIA #Z117MWOLTEB10RS	SURFACE/ COVE	1	F017XP/ 832/ECO 35K	120	LOW-VOLTAGE RECESSED DOWNLIGHT WITH FLAT ETCHED GLASS LENS.
K2	32	-	LITHONIA #Z132MWOLTEB10RS	SURFACE/ COVE	1	F032XP/ 832/ECO 35K	120	SAME AS TYPE K1 EXCEPT 4" IN LENGTH. PROVIDE "GREEN" SLEEVE OVER LAMP.
L	100	-	KOHLER "CAYMAN SHORES" #4924	WALL	1	100W-T3 HALOGEN	120	EXTERIOR WALL MOUNTED LANTERN WITH BRONZE FINISH AND LIGHT UMBER TEXTURED GLASS.
M	35	-	ZUMTOBEL #S4D4348S24422LC120	RECESSED	1	35W CMH 85CRI	120	4" DIAMETER CMH DOWNLIGHT CLEAR ALZAK REFLECTOR. EXTERIOR/EAVES LIGHTING.
T	-	-	CONTECH #LT-12-P	SURFACE/ CEILING	-	-	120	8' SINGLE CIRCUIT TRACK WITH WHITE FINISH. TRACK TO BE SURFACE MOUNTED TO GRID CEILING. MAXIMUM WATTAGE ALLOWED FOR 12' SECTION OF TRACK IS 800 WATTS.
TA	50	-	CONTECH #CTL216-P	SURFACE/ CEILING	1	50W MR16	120	ROUND BACK WHITE CYLINDER TRACK HEAD MOUNTED TO TRACK.
X1	-	-	CON-TECH #EXHNGLED1EM-A268	SURFACE	-	LED	120/277	THERMOPLASTIC LED EXIST SIGN WITH BATTERY BACK-UP AND GREEN LETTERS.
X2	-	-	CON-TECH #REXELSGLED1EM-A268	CEILING	-	LED	120/277	CEILING MOUNT RECESSED EDGE-LIT EXIT SIGN WITH BATTERY BACK-UP AND GREEN LETTERS.



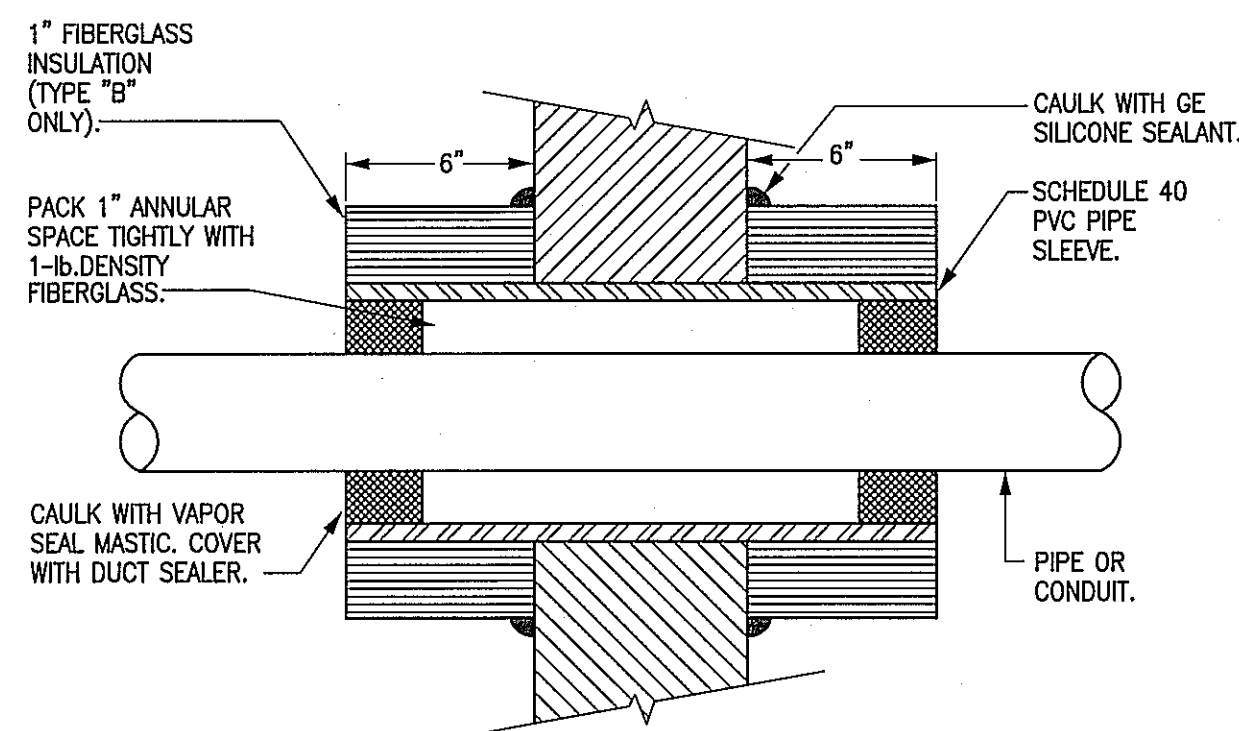
4 CONDUIT PENETRATION THRU ROOF - DETAIL

SCALE: NONE



3 ROOF MOUNTED RECEPTACLE DETAIL

SCALE: NONE



2 CONDUIT SEALANT THRU EXTERIOR WALLS - DETAIL

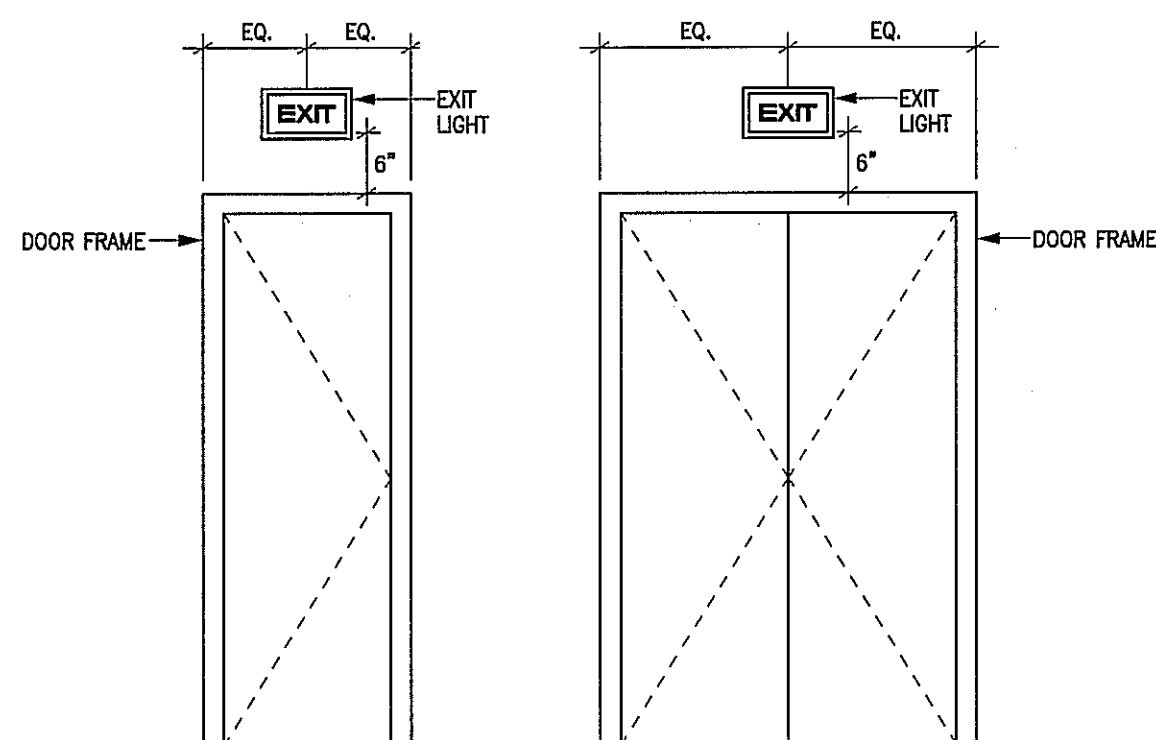
SCALE: NOT TO SCALE

NOTES:
1. TYPICAL TREATMENT FOR PLUMBING PIPES AND H.V.A.C. PIPING.
2. SIZE SLEEVE TO ACCEPT CONDUIT.

SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
—	FLUORESCENT FIXTURE
—	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT
○	DOWNLIGHT FIXTURE
○	LIGHT FIXTURE - WALL MOUNTED
○	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
○	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
⊗	EXIT LIGHT-CEILING MTD WITH DIRECTIONAL ARROWS AS REQUIRED
⊗	EXIT LIGHT-WALL MTD WITH DIRECTIONAL ARROWS AS REQUIRED
⊗	EMERGENCY LIGHTING UNIT EQUIPMENT
SWITCHES	
\$	SINGLE POLE SWITCH
\$2	2-POLE SWITCH
\$3	3-WAY SWITCH
RECEPTACLES AND OUTLETS	
⊕	DUPLEX RECEPTACLE
⊕	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
⊕	DOUBLE DUPLEX ISOLATED GROUND IN 2-GANG BOX WITH SINGLE COVER PLATE
⊕	ISOLATED GROUND DUPLEX RECEPTACLE
⊕	JUNCTION BOX
⊕	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
⊕	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
⊕	FLUSH FLOOR JUNCTION BOX
⊕	TELEPHONE OUTLET, 1-GANG BOX WITH TELEPHONE (CAT3) WIRING TO TELEPHONE TERMINAL BOARD AND RJ11 OUTLET.
⊕	TELEPHONE/DATA OUTLET, 1-GANG BOX WITH TELEPHONE (CAT3) AND DATA (CAT5E) WIRING WITH RJ11 OUTLET FOR TELEPHONE AND RJ45 OUTLET FOR DATA.
MOTOR CONTROLLERS AND EQUIPMENT	
⊕	MOTOR, MAKE FINAL MOTOR CONNECTION
⊕	DISCONNECT SWITCH AS REQUIRED
⊕	MANUAL MOTOR SWITCH AS REQUIRED
ELECTRICAL EQUIPMENT	
⊕	277/480 VOLT DISTRIBUTION OR PANELBOARD
⊕	120/208 VOLT PANELBOARD
⊕	TELEPHONE CABINET
⊕	PLYWOOD TELEPHONE BACKBOARD
⊕	DRY TYPE TRANSFORMER
CIRCUITING	
—	CONDUIT
---	CONDUIT IN/OR BELOW FLOOR, SLAB, OR GRADE
---	3/4" C. UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; "Z" HATCH, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN.
---	PARTIAL ELECTRICAL HOME RUN
SUBSCRIPTS AND ABBREVIATIONS	
•	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL, MILLWORK DRAWINGS AND OTHER TRADES

GENERAL NOTE:
ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-3R MINIMUM UNLESS NOTED OTHERWISE.



1 TYPICAL EXIT SIGN LOCATION

SCALE: NOT TO SCALE

SPECIFICATIONS

GENERAL
• VERIFY ALL DIMENSIONS AT THE JOB SITE AND FROM THE ARCHITECTURAL PLANS.

• UNLESS OTHERWISE NOTED, CONTRACTOR AND SUBCONTRACTOR SHALL PAY FOR ALL PERMITS AND CHARGES REQUIRED AND SHALL COMPLY WITH ALL GOVERNING CODES AND ORDINANCES.

• VISITING THE SITE: EACH BIDDER SHALL VISIT THE SITE OF THE PROPOSED WORK AND SHALL FULLY INFORM HIMSELF REGARDING THE FACILITIES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR WORK OR MATERIAL OMITTED FROM THE BIDDER'S CONTRACT PROPOSAL DUE TO HIS FAILURE TO SO INFORM HIMSELF BY SUCH INVESTIGATION.

• ALL CHANNELING AND PATCHING OF ROOF, FLOOR, CEILING AND WALLS SHALL BE GENERAL CONTRACTOR.

• CONTRACTOR TO PROVIDE RECORD DRAWINGS TO OWNER.

FURNISH AND INSTALL A COMPLETE ELECTRICAL SYSTEM AS INDICATED ON PLANS. ELECTRICAL CONTRACTOR TO MAKE ALL FINAL CONNECTIONS TO ALL EQUIPMENT. MATERIAL SHALL BE AS FOLLOWS:

CONDUIT:

• ALL ELECTRICAL CONDUCTORS SHALL BE INSTALLED IN CONDUIT COMPLYING WITH THE NATIONAL ELECTRICAL CODE. WHERE INSTALLED SUBJECT TO STRESS FROM COLLISION OR IMPACT, CONDUIT SHALL BE GALVANIZED RIGID STEEL. WHERE RIGID STEEL CONDUIT IS NOT REQUIRED, CONDUCTORS SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING WITH ELECTRO-GALVANIZING OUT SIDE AND ENAMEL INSIDE. TUBING SHALL BE BY "TRIANGLE" OR AN APPROVED SUBSTITUTION. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED AT ALL MOTOR CONNECTIONS, OR WHERE MOVEMENT/VIBRATION IS A CONCERN. UNLESS NOTED OTHERWISE FLEXIBLE METAL CONDUIT MAY BE USED ONLY FOR CONNECTION TO LIGHTING FIXTURES, IN LENGTHS NOT TO EXCEED 6 (SIX) FEET. MINIMUM CONDUIT SIZE SHALL BE 1/2 INCH. MINIMUM SIZE FOR FLEXIBLE METAL CONDUIT SHALL BE 1/2 INCH. CONDUIT/ CONDUCTOR FILL SHALL CONFIRM TO NATIONAL ELECTRICAL CODE, LATEST EDITION.

• CARLON PVC TYPE SCH. 40 HEAVY WALL CONDUIT WITH GROUND WIRE MAY BE USED BELOW FLOOR SLAB OR UNDERGROUND IN LIEU OF RIGID, THREADED, GALVANIZED CONDUIT. PVC SCH. 40 CONDUIT SHALL NOT BE RUN IN OR ABOVE FLOOR SLAB, OR IN TILT WALL PANELS. PVC CONDUIT SHALL TERMINATE BELOW FLOOR SLAB WITH RIGID, THREADED METAL CONDUIT ADAPTER. CONDUIT ABOVE SLAB SHALL BE METAL.

• A GROUND CONDUCTOR SHALL BE SUPPLIED IN NONMETALLIC CONDUIT OR E.M.T. UTILIZING SET SCREW TYPE CONNECTORS. THE GROUND CONDUCTOR SHALL BE BARE, STRANDED, ANNEALED COPPER.

• CONDUIT TO BE SUPPORTED FROM JOIST. PROVIDED HANGERS, SUPPORTS AND FASTENINGS AS REQUIRED BY NATIONAL ELECTRICAL CODE DO NOT SUPPORT FROM ROOF DECK.

CONDUIT FITTINGS:

• ALL CONDUIT FITTINGS SHALL BE STEEL, SET SCREW OR COMPRESSION TYPE, INSULATED THROAT, UL LISTED. FITTINGS SHALL BE AS MANUFACTURED BY APPLETON ELECTRIC, OZ GEDNEY CO., ARROW CONDUIT AND FITTINGS CORP., OR EQUAL.

CONDUCTORS:

• ALL CONDUCTORS SHALL BE COPPER. EACH CONDUCTOR SHALL BE CONTINUOUS, WITHOUT WELD, SPICE, OR JOINT THROUGHOUT ITS LENGTH, AND UNIFORM IN CROSS-SECTION. WIRE #6 AWG AND LARGER SHALL HAVE TYPE "THWN" INSULATION. WIRE #8 AWG AND SMALLER SHALL HAVE DUAL-RATED TYPE "THHN/THWN" INSULATION. MINIMUM WIRE SIZE, EXCEPT FOR CONTROL WIRING, SHALL BE #12 AWG. ALL WIRING INSIDE LIGHTING FIXTURES SHALL BE TEMPERATURE RATED PER THE N.E.C. - 90 DEGREES C MINIMUM. BRANCH CIRCUIT WIRING WITHIN 3 INCHES OF FLUORESCENT BALLASTS SHALL BE TEMPERATURE RATED FOR 90 DEGREES C.

DATA/TELEPHONE/CATV CABLING:

• ALL WIRING ABOVE CEILING SHALL BE PLENUM RATED OR INSTALLED IN CONDUIT. CONTRACTOR TO PROVIDE WIRING FROM EACH DEVICE TO PLYWOOD BACKBOARD LOCATED IN KITCHEN.

DATA CABLE SHALL BE CAT5 OR BETTER.
TELEPHONE CABLE SHALL BE CAT3 OR BETTER.
CATV CABLE SHALL BE CO-AX.

WIRING DEVICES:

1. ALL WIRING DEVICES TO BE 'LEVITON' DECORA SERIES. THIS INCLUDES SWITCHES, DIMMERS, RECEPTACLES, AND TELEPHONE/DATA OUTLETS.
2. ALL ISOLATED GROUND RECEPTACLES SHALL BE ORANGE 'IG 5-20R', ALL OTHERS TO BE GREY '5-20R'.
3. ALL COVERPLATES TO BE 'LEVITON' DECORA SERIES WITH STAINLESS-STEEL FINISH. VERIFY EVERY DEVICE AND COVERPLATE FINISH ON THIS PROJECT WITH OWNER.

LIGHTING PANELBOARDS:

1. 120/208V, 3-PHASE' 4-WIRE, 120/240V, 1-PHASE, 3-WIRE OR 277/480V, 3-PHASE, 4-WIRE: FURNISH AND INSTALL AS SHOWN ON PLANS, LIGHTING PANELBOARDS BY SQUARE 'D' TYPE 'NQD', STYLE 'Q', OR EQUAL WITH BOLT ON CIRCUIT BREAKERS OR AN APPROVED SUBSTITUTION. ADDITIONAL BREAKERS FOR EXISTING PANELBOARDS SHALL BE OF TYPE MATCHING THE EXISTING BREAKERS.

2. PROVIDE TYPED DIRECTORY CARDS UNDER PLASTIC ON ALL DOORS OF PANELS.

SAFETY SWITCHES:

- SAFETY SWITCHES SHALL BE FURNISHED AND INSTALLED AT ALL LOCATIONS INDICATED ON PLANS OR REQUIRED BY THE NATIONAL ELECTRICAL CODE. ALL SWITCHES SHALL BE HEAVY DUTY TYPE AND SHALL HAVE CLIPS FOR REJECTION TYPE FUSES AND SHALL BE BY SQUARE 'D', G.E., OR EQUAL, FOR THE VOLTAGE AND LOAD INVOLVED. PROVIDE A COMPLETE SET OF FUSES IN ALL FUSED SWITCHES. FUSES SHALL BE CLASS RK-1 (BUSSMAN 'LOW PEAK') FOR CIRCUITS UP TO 600 AMPS AND CLASS L (BUSSMAN 'HI-CAP' KRP-C) FOR CIRCUITS ABOVE 600 AMPS.