



ISSUE
09-10-10 ISSUED FOR PERMIT
10-08-10 DBR REVIEW COMMENTS
11-02-10 ISSUED FOR CONSTRUCTION

LIGHTING FIXTURE SCHEDULE									
MARK	WATTS	NO.	MANUFACTURER AND CATALOG NUMBER	MOUNTING	LAMPS		VOLTS	REMARKS	
					NO.	TYPE			
A	115	7	LITHONIA #2SRFG432FWA12125VMVOLTGE10PS1/4LG-A268	RECESSED	4	F032XP/835/ECO 35K	277	2'x4', 4-LAMP FLUORESCENT LAY-IN WITH 1/2" THICK ACRYLIC LENS & ADDITIONAL LENS GASKETING.	
AE	115	3	LITHONIA #2SRFG432FWA12125VMVOLTGE10PS1/4LG-EL14SD-A268	RECESSED	4	F032XP/835/ECO 35K	277	SAME AS TYPE "A" EXCEPT WITH EMERGENCY BATTERY PACK W/ 90 MIN. OF BACK-UP.	
B	61	1	LITHONIA #C232120GEB10PRS-WG-A268	CHAIN	2	F032XP/841/ECO 41K	277	4', 2-LAMP FLUORESCENT STRIP WITH WIREGUARD.	
BE	61	2	LITHONIA #C232120GEB10PRS-WG-EL-A268	CHAIN	2	F032XP/841/ECO 41K	277	SAME AS TYPE "B" EXCEPT WITH EMERGENCY BATTERY PACK W/ 90 MIN. OF BACK-UP.	
B2	17	1	LITHONIA #C217120GEB10PRS-WG-A268	CHAIN	2	F017XP/841/ECO 41K	277	2', 2-LAMP FLUORESCENT STRIP WITH WIREGUARD.	
C	60	4	TO BE SELECTED BY ARCHITECT AND PROVIDED AND INSTALLED BY CONTRACTOR	WALL	1	60W INCANDESCENT MAX.	120	DECORATIVE WALL SCONCE.	
D1	50	7	FOCAL POINT - I.D. ACCENT PINHOLE TRIM: #D1-RO-PIN-W-CL HOUSING: #FD4-MR-E1-RO-T-WR50	RECESSED	1	50W MR16 WIDE 40° BEAM	120	LOW VOLTAGE RECESSED PINHOLE LIGHT WITH WIDE BEAM SPREAD LAMP. (ROUND)	
D2	50	3	FOCAL POINT - I.D. WALL WASH TRIM: #D1-RO-PIN-W-CL HOUSING: #FD4-MR-E1-RO-T-WR50	RECESSED	1	50W MR16 WIDE 50° BEAM	120	LOW VOLTAGE RECESSED WALL WASHER LIGHT WITH WIDE BEAM SPREAD LAMP. (ROUND)	
D3	50	111	FOCAL POINT - I.D. ACCENT PINHOLE TRIM: #D1-RO-PIN-W-CL HOUSING: #FD4-MR-E2-RO-T-WR35	RECESSED	1	35W MR16 SPL10 10° BEAM	277	LOW VOLTAGE RECESSED PINHOLE LIGHT WITH NARROW BEAM SPREAD LAMP. (ROUND)	
D4	36	1	LITHONIA #AF-132TRT-6-AR-T73-MVOLT	RECESSED	1	32W CFL TRT	120/277	6" 32 WATT, HORIZONTAL COMPACT FLUORESCENT DOWNLIGHT WITH A GLASS PRISMATIC LENS.	
D5	100	900	ZUMTOBEL #S4D7332277330RCW9930	RECESSED	1	100WATT CMH R5CRL	277	7" DIAMETER CMH DOWNLIGHT CLEAR ALZAK REFLECTOR. EXTERIOR/EAVES LIGHTING.	
D4E	36	1	LITHONIA #AF-132TRT-6-AR-T73-MVOLT-EL	RECESSED	1	32W CFL TRT	120/277	SAME AS TYPE "D4" EXCEPT WITH EMERGENCY BATTERY PACK W/ 90 MIN. OF BACK-UP.	
F	-	5	PATIO FAN #137525	PENDANT	-	-	120	CEILING FAN WITHOUT LIGHT KIT.	
G1	300	2	TO BE SELECTED BY ARCHITECT AND PROVIDED AND INSTALLED BY CONTRACTOR	PENDANT	-	300W INCANDESCENT MAX.	120	DECORATIVE CHANDELIER.	
G2	300	3	TO BE SELECTED BY ARCHITECT AND PROVIDED AND INSTALLED BY CONTRACTOR	PENDANT	-	300W INCANDESCENT MAX.	120	DECORATIVE CHANDELIER.	
H	20	5	TO BE SELECTED BY ARCHITECT AND PROVIDED AND INSTALLED BY CONTRACTOR	PENDANT	-	20W INCANDESCENT MAX.	120	DECORATIVE PENDANT.	
EM	-	9	LITHONIA #ELM627-B-N-SD-A268	WALL	2	9W KRYPTON	120/277	BLACK THERMOPLASTIC EMERGENCY LIGHTING UNIT WITH 90 MIN. OF BATTERY BACK-UP. MOUNT UNIT 6" BELOW CLG. UNLESS OTHERWISE NOTED.	
L1	100	1	GE "TETRA" LED	COVE	-	LED	120	PROVIDE DRIVER "GE" LED #74801 COORDINATE QUANTITY OF DRIVERS REQUIRED W/ EACH LENGTH REQUIRED.	
TA	50	6	TECH LIGHTING #700-JON-FJ-06-S	TRACK	1	50W MR16	120	LOW VOLTAGE TRACK HEAD MOUNTED TO TRACK AS INDICATED ON LIGHTING PLANS.	
T	-	1	TECH LIGHTING #T-TRAK FREE JACK CONNECTOR LENGTH AS INDICATED ON PLANS	TRACK	-	-	120	SINGLE-CIRCUIT TRACK. COLOR FINISH PER ARCH. LOW VOLTAGE INTEGRAL XFMR. TRACK TO BE PENDANT MOUNTED AT A HEIGHT DIRECTED BY THE OWNER. MAX ALLOWED WATTAGE FOR 4' SECTION OF TRACK IS 300 WATTS.	
X1	3.5	-	LITHONIA #LRP1GC120/277-ELN-A268	UNIVERSAL	-	LED	120/277	SINGLE FACE EDGE LIT LED EXIT SIGN W/ GREEN LETTERING AND 90 MIN. OF BATTERY BACK-UP.	
X2	3.5	-	LITHONIA #LMS1G120/277-ELN-A268	UNIVERSAL	-	LED	120/277	WHITE THERMOPLASTIC LED EXIT SIGN WITH 90 MIN. OF BATTERY BACK-UP.	

NOTES:
1. ALL LIGHT FIXTURES TO BE PROVIDED AS SPECIFIED NO SUBSTITUTIONS.
2. REFER TO ARCHITECT/OWNER FOR EXACT FINISH OF ALL LIGHT FIXTURES.

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
⊕	FLUSH FLOOR DUPLEX RECEPTACLE OUTLET WITH DATA
⊕	TELEPHONE OUTLET, 1-GANG BOX WITH 3/4" CONDUIT TO ABOVE CEILING
⊕	TELEPHONE/DATA OUTLET, 1-GANG BOX WITH 3/4" CONDUIT TO ABOVE CEILING WITH RJ11 OUTLET FOR TELEPHONE AND RJ45 OUTLET FOR DATA.
⊕	CATV OUTLET
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.	

SPECIFICATIONS	
GENERAL	
<ul style="list-style-type: none"> 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. 	
<p>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:</p>	
CONDUIT:	
<ul style="list-style-type: none"> 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. CONDUIT/CONDUCTOR RILL 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:	
<ul style="list-style-type: none"> 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:	
<ul style="list-style-type: none"> ALL CONDUCTORS SHALL BE COPPER. EACH CONDUCTOR SHALL BE CONTINUOUS, WITHOUT WELD, SPLICE, 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 FOR THE M.C.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:	
<ul style="list-style-type: none"> ALL WIRING ABOVE CEILING SHALL BE PLENUM RATED OR INSTALLED IN CONDUIT. CONTRACTOR TO PROVIDE WIRING FROM EACH DEVICE TO PLYWOOD BACKBOARD LOCATED IN OFFICE. DATA CABLE SHALL BE CAT5. TELEPHONE CABLE SHALL BE CAT3 OR BETTER. CATV CABLE SHALL BE CO-AX. 	
WIRING DEVICES:	
<ul style="list-style-type: none"> ALL WIRING DEVICES TO BE "LEVITON" DECORA SERIES. THIS INCLUDES SWITCHES, DIMMERS, RECEPTACLES, AND TELEPHONE/DATA OUTLETS. ALL ISOLATED GROUND RECEPTACLES SHALL BE ORANGE "IG 5-20R", ALL OTHERS TO BE GREY "5-20R". ALL COVERPLATES TO BE "LEVITON" DECORA SERIES WITH STAINLESS-STEEL FINISH. (VERIFY EVERY DEVICE AND COVERPLATE FINISH ON THIS PROJECT WITH OWNER.) 	
LIGHTING PANELBOARDS:	
<ul style="list-style-type: none"> 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 "NQDD", 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:	
<ul style="list-style-type: none"> 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.C., OR EQUAL. FOR THE VOLTAGE AND LOAD INVOLVED. PROVIDE A COMPLETE SET OF FUSES IN ALL FUSED SWITCHES. FUSES SHALL BE CLASS AK-1 (BUSSMAN "LOW PEAK") FOR CIRCUITS UP TO 600 AMPS AND CLASS L (BUSSMAN "HI-CAP" KRP-C) FOR CIRCUITS ABOVE 600 AMPS. 	
TRANSFORMERS:	
<ul style="list-style-type: none"> FURNISH AND INSTALL G.E. TYPE "QL" OR EQUAL DRY TYPE TRANSFORMER WITH 2 1/2% CAPACITY TAPS ON THE PRIMARY WINDING (TWO ABOVE AND FOUR BELOW NORMAL VOLTAGE). TRANSFORMER SHALL BE RATED FOR 150° C. RISE ABOVE 40° C. AMBIENT DURING USE AND HAVE AN INSULATION SYSTEM RATED TO WITHSTAND 220° C. 	

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PROJECT NUMBER
10018
SHEET NAME
ELECTRICAL SPECIFICATIONS
SHEET NUMBER

E6.00