



FIXTURE TYPE 'X4' POLE BASE DETAIL
NO SCALE

INTERIOR LIGHTING FIXTURE SCHEDULE											
MARK	FITURE DESCRIPTION			REMARKS	VOLT	MOUNTING	LAMPS		WATTS	MANUFACTURER	TYPICAL LOCATION
	ILLUM	TYPE	DIFFUSER				QTY	LUMENS			
A	L.E.D.	2'x4'	FROSTED ACRYLIC		277	GRID	1	4400	38	METALUX #22AC-LDS-44-UNV-1835-CD1	CORRIDORS
A1	L.E.D.	2'x4'	FROSTED ACRYLIC	1% DIMMING	277	GRID	1	4400	38	METALUX #22AC-LDS-44-UNV-1835-HCD1	THEATER
B	L.E.D.	2'x2'	FROSTED ACRYLIC		277	GRID	1	3400	30	METALUX #22AC-LDS-34-UNV-1835-CD1	CORRIDORS
C	L.E.D.	DOWN LIGHT	SEMI-SPEC CLEAR	8\"/>							

- INTERIOR LIGHTING NOTES:**
- ALL LAMPS AND L.E.D. FIXTURES SHALL BE 90 COLOR RENDERING INDEX MINIMUM, AND 3500 KELVIN TEMPERATURE RATING (PUBLIC AREAS) OR 3000 KELVIN (RESIDENT UNITS), OR AS SELECTED BY THE ARCHITECT. CONTRACTOR SHALL SUBMIT LAMP TYPE INFORMATION WITH THE LIGHTING SHOP DRAWING SUBMITTAL.
 - ALL LED FIXTURES SHALL BE CAPABLE OF DIMMING OPERATION. COORDINATE DIMMER SWITCH, WIRING, AND ALL DIMMING REQUIREMENTS WITH FIXTURE MANUFACTURER. PROVIDE DIMMER SWITCH AND ALL WIRING, OUTLET BOXES, ETCETERA, AS NECESSARY FOR COMPLETE DIMMING OPERATION.
 - PROVIDE REPLACEMENT TYPE LED LAMPS WITH MEDIUM SCREW-IN BASE.
 - PROVIDE ONE REPLACEMENT TYPE BR40 LED LAMP WITH MEDIUM SCREW-IN BASE, AND ONE 250 WATT BR40 INFRARED BULB.
 - RECESSED LIGHT FIXTURE HOUSING THAT IS IN CONTACT WITH INSULATION SHALL BE IC RATED.
 - CONTRACTOR TO PROVIDE UNIVERSAL 120/277 VOLT LIGHTING BALLAST AND L.E.D. DRIVERS WHERE POSSIBLE.
 - PROVIDE L.E.D. TAPE LIGHT IN LENGTHS AS REQUIRED. L.E.D. TAPE LIGHT SHALL BE MOUNTED IN AN ALUMINUM MOUNTING CHANNEL. PROVIDE MOUNTING CLIPS, HARDWARE POWER SUPPLIES AND ACCESSORIES, LINEAR CONNECTORS, AND CONTROLLERS AS REQUIRED FOR FULL OPERATION AND COMPLETE INSTALLATION AS RECOMMENDED BY THE MANUFACTURER. REFER TO ARCHITECTURAL PLANS, DETAILS, ELEVATIONS, AND SECTIONS FOR MOUNTING AND TYPICAL LOCATION OF L.E.D. TAPE LIGHT.
 - FIXTURE TYPE 'U9', PROVIDE ONE SWITCH TO CONTROL LIGHT, SEPARATE SWITCH TO CONTROL FAN, AND TIMER SWITCH TO CONTROL HEAT LAMP.
- GENERAL FIXTURE NOTES:**
- FIXTURE MARK IN TYPICAL FOR ALL FIXTURES OF THE SAME SYMBOL TYPE WITHIN THE SAME ROOM OR AREA U.N.O.
 - FIXTURE CATALOG # ESTABLISHES THE MANUFACTURER'S SERIES # - COMPLETE CATALOG # SHALL BE DETERMINED BY THE SCHEDULE DESCRIPTION, PLAN NOTES AND THE SPECIFICATIONS.

EMERGENCY LIGHTING FIXTURE SCHEDULE											
MARK	DESIG. (NOTE 4)	FITURE DESCRIPTION			REMARKS	VOLT	MOUNTING	LAMPS		MANUFACTURER	TYPICAL LOCATION
		ILLUM	TYPE	SOURCE				QTY	TYPE		
EX1	LED	EXIT	INTEGRAL BATTERY		HIGH IMPACT WHITE THERMO PLASTIC HOUSING, SINGLE FACE	277	UNIVERSAL	-	FURNISHED W/ UNIT		EXITS
EX2	LED	EXIT	INTEGRAL BATTERY		HIGH IMPACT WHITE THERMO PLASTIC HOUSING, DOUBLE FACE	277	UNIVERSAL	-	FURNISHED W/ UNIT		EXITS
EX3	LED/HALOGEN	EXIT	INTEGRAL BATTERY		HIGH IMPACT WHITE THERMO PLASTIC HOUSING, SINGLE FACE UNIVERSAL MOUNT	277	UNIVERSAL	-	FURNISHED W/ UNIT		EXITS
EB1	HALOGEN	EMERGENCY	INTEGRAL BATTERY		TWIN HEAD, NO REMOVE, LEAD CALCIUM BATTERY	277	WALL	2	FURNISHED W/ UNIT		

EMERGENCY LIGHTING NOTES:

- EXIT SIGNS SHALL HAVE DIRECTIONAL ARROWS AS INDICATED ON THE PLANS.
- VERIFY COLOR AND CONFIGURATION OF EXIT SIGN LETTERS WITH LOCAL CODES. EXISTING SIGN SHALL NOT EXCEED 5 WATTS PER FACE.
- EXIT SIGNS AND EMERGENCY BATTERY PACKS ARE INDICATED BY SYMBOL ON THE PLANS IN USE OF LETTER DESIGNATION.
- EXIT SIGNS AND EMERGENCY BATTERY PACKS SHALL BE CONNECTED AHEAD OF LOCAL SWITCH CONTROL.
- EXIT LIGHTS SHALL BE MOUNTED: (1) ON WALL 6\"/>

EXTERIOR LIGHTING FIXTURE SCHEDULE											
MARK	FITURE DESCRIPTION			REMARKS	VOLT	MOUNTING	LAMPS		WATTS	MANUFACTURER	TYPICAL LOCATION
	ILLUM	TYPE	DIFFUSER				QTY	LUMENS			
X1	L.E.D.	WALL LIGHT	ACRYLIC LENS	TYPE 2 DISTRIBUTION BRONZE FINISH	277	SURFACE	1	7,561	69	LITHONIA #S3WLED-30C-700-40C-T2M-277	EGRESS
X2	L.E.D.	UP/DOWN CYLINDER	CLEAR REFLECTOR	MATTE WHITE FINISH, MEDIUM DIST. UP/DOWN LIGHT, WET	277	SURFACE	1	2,600	28	CONFTECH #C1B-4-30K-MVD-LD-X-M-CLR-P	ENTRANCE
X3	L.E.D.	DOWN LIGHT	SEMI-SPEC CLEAR	6\"/>							

EXTERIOR LIGHTING NOTES:

- PROVIDE 12\"/>

GENERAL FIXTURE NOTES:

- FIXTURE MARK IS TYPICAL FOR ALL FIXTURES OF THE SAME SYMBOL TYPE WITHIN THE SAME AREA U.N.O.
- FIXTURE CATALOG # ESTABLISHES THE MANUFACTURER'S SERIES # - COMPLETE CATALOG # SHALL BE DETERMINED BY THE SCHEDULE DESCRIPTION, PLAN NOTES AND THE SPECIFICATIONS.

LIGHTING CONTROL SCHEDULE						
MARK	APPLICATION	LOCAL CONTROL	OCCUPANCY SENSOR	NOTES	COMMENTS	
A	TYPICAL ROOM/ SPACE	MANUAL ON/ OFF	DT (PIR/ US)	NOTES 1 THRU 4	SYSTEM TO BE WATSTOPPER OR APPROVED EQUIVALENT (NOTE 1)	
B	TYPICAL ROOM/ SPACE WITH DAYLIGHT ZONE	MANUAL ON/ OFF	DT W/ PHOTO-SENSOR	NOTES 1 THRU 5	SYSTEM TO BE WATSTOPPER OR APPROVED EQUIVALENT (NOTE 1)	
	NOT USED.					
D	GANG RESTROOM	AUTO ON/ OFF	US	NOTES 1, 5, 6 & 7	SYSTEM TO BE WATSTOPPER OR APPROVED EQUIVALENT (NOTE 1)	
P	EXTERIOR DUSK ON/ DAWN OFF	AUTO ON/ OFF	N/A	NOTE 1 & 8	PROVIDE EXTERIOR PHOTOCCELL	
S	EXTERIOR DUSK ON/ TIME CLOCK OFF	AUTO ON/ OFF	N/A	NOTE 1 & 8	PROVIDE PROGRAMMABLE TIME CLOCK SYSTEM W/ EXTERIOR PHOTOCCELL	
T	TIME CLOCK ON/ TIME CLOCK OFF	AUTO ON/ OFF	N/A	NOTE 1 & 8	PROVIDE PROGRAMMABLE TIME CLOCK SYSTEM	

GENERAL REQUIREMENTS AND SEQUENCE OF OPERATION NOTES:

- LIGHTING WIRING SHOWN ON CONTRACT DRAWINGS ARE DIAGRAMATIC FOR ESTABLISHING THE CONTROL ZONE TYPE ONLY. ALL CONTROL SYSTEMS SHALL BE COMPLETE TO INCLUDE ALL REQUIRED DEVICES, RELAYS AND CONTROL WIRING FOR A FULLY FUNCTIONING SYSTEM. ALL DEVICES AND COMPONENTS SHALL BE LOCATED IN ACCESSIBLE VENTILATED SPACES. PROVIDE FACTORY DRAWINGS OF THE SPECIFIC PROJECT LIGHTING PLANS TO INCLUDE ALL PROPOSED DEVICES, DETECTORS AND CONTROL WIRING FOR EACH SPACE. SUBMIT FACTORY LIGHTING CONTROL DRAWINGS FOR REVIEW & INCLUDE DATA SHEETS FOR EACH DEVICE TYPE TO INCLUDE DETECTION PATTERNS. OCCUPANCY CONTROL SYSTEMS SHALL BE WATSTOPPER OR APPROVED EQUIVALENT.
- ALL INTERIOR COMMERCIAL SPACES SHALL BE PROVIDED WITH LOCAL OCCUPANCY SENSOR CONTROLS IN ACCORDANCE WITH THE LATEST IECC AND LOCAL JURISDICTIONAL REQUIREMENTS. SYSTEM SHALL CONSIST OF TYPE AND QUANTITY OF SENSORS AS REQUIRED BY THE MANUFACTURER FOR THE RANGE OF COVERAGE REQUIRED FOR THE SPECIFIC SPACE CONFIGURATION AND TO PREVENT FALSE TRIPPING. SYSTEM SHALL BE MANUAL ON WITH AUTOMATIC OFF WITHIN 30 MINUTES OF THE LAST MOTION DETECTION. ROOMS WITH MANUALLY TURNED ON TO REPEAT THE SEQUENCE (SEE NOTES 6 & 7 FOR EXCEPTIONS TO MANUAL CONTROLS). SPACES LESS THAN 300 SQUARE FEET MAY UTILIZE INTEGRAL WALL SWITCHES FOR MANUAL ON/ OFF, OCCUPANCY SENSOR AND DAYLIGHT CONTROLS.
- ALL INTERIOR SPACES SHALL HAVE LOCAL MANUAL ON/ MANUAL OFF CONTROLS. SWITCHES IN OCCUPANCY SENSOR CONTROLLED SPACES SHALL BE LOW VOLTAGE TYPE AND COMPATIBLE WITH THE OCCUPANCY SENSOR CONTROL SYSTEM. WHEN THE MANUAL SWITCH IS IN THE OFF POSITION THE OCCUPANCY SENSOR SHALL BE BYPASSED TO MAINTAIN LIGHTS OFF UNTIL MANUALLY TURNED ON. WHEN THE MANUAL SWITCH IS IN THE ON POSITION THE OCCUPANCY SENSOR SHALL ACTIVATE FOR MOTION DETECTION TO TURN LIGHTS ON IMMEDIATELY. THE LIGHTS SHALL TURN OFF AUTOMATICALLY WITHIN 30 MINUTES OF LAST MOTION DETECTION AND REMAIN OFF UNTIL MANUALLY TURNED ON TO REPEAT THE SEQUENCE (SEE NOTES 6 & 7 FOR EXCEPTIONS TO MANUAL CONTROLS). SPACES LESS THAN 300 SQUARE FEET MAY UTILIZE INTEGRAL WALL SWITCHES FOR MANUAL ON/ OFF, OCCUPANCY SENSOR AND DAYLIGHT CONTROLS.
- INTERIOR SPACES INDICATED WITH DIMMING SWITCHES SHALL BE PROVIDED WITH LOW VOLTAGE DIMMING SWITCHES COMPATIBLE WITH THE OCCUPANCY SENSOR SYSTEM. PROVIDE ALL NECESSARY CONTROL WIRING FROM CONTROLLER TO EACH FIXTURE FOR 0-10 VOLT FULL RANGE DIMMING. CONFERENCE, MEETING ROOMS, CLASSROOMS AND SPACES WHERE INDICATED SHALL INCLUDE FULL RANGE MANUAL DIMMING CONTROL.
- INTERIOR SPACES IN DAYLIGHT ZONES WITHIN 15 FEET OF EXTERIOR GLAZING OR SKYLIGHT SHALL BE PROVIDED WITH PHOTOSENSOR CONTROLS WITH ADJUSTABLE SENSITIVITY. THE SYSTEM SHALL BE HOLD-OFF TYPE UNLESS REQUIRED OTHERWISE BY THE LOCAL JURISDICTION. SPACES LESS THAN 300SF IN DAYLIGHT ZONES MAY BE INTEGRAL TO THE WALL SWITCH TO INCLUDE OCCUPANCY SENSOR AND DIMMING (WHERE INDICATED).
- CORRIDORS AND GANG RESTROOMS DO NOT REQUIRE LOCAL ON/ OFF CONTROLS AND WILL BE AUTO ON/ OFF CONTROLLED IN COMBINATION WITH NIGHTLIGHTS UNO.
- NIGHTLIGHTS AND EMERGENCY BATTERY LIGHTS SHALL BE CONNECTED AHEAD OF LOCAL CONTROLS AND AUTOMATIC CONTROLS FOR 24/7 OPERATION EXCEPT AS OTHERWISE INDICATED ON THE PLANS.
- EXTERIOR LIGHTING AND SPECIAL EQUIPMENT (WHERE APPLICABLE) WILL REQUIRE PROGRAMMABLE TIME CLOCK CONTROL (365 DAY CALENDAR WITH HOLIDAY AND LEAP YEAR FUNCTIONS). PROVIDE PHOTOSENSOR INPUT DUSK ON/ DAWN OFF CONTROL WHERE INDICATED. SPECIAL EQUIPMENT SUCH AS DOMESTIC HOT WATER RECIRC PUMPS SHALL BE TIME CLOCK ON/ OFF CONTROLLED COORDINATED WITH BUILDING OCCUPANCY (UNLESS BUILDING IS OCCUPIED 24/7). SYSTEM SHALL BE COMPLETE TO INCLUDE RELAYS/ CONTACTORS FOR COMMON CIRCUIT CONTROL. SYSTEM SHALL BE CAPABLE OF INTEGRATION WITH THE BUILDING ATC SYSTEM WHERE APPLICABLE. PROVIDE 120 VOLT POWER FOR TIME CLOCK AND RELAY/ CONTACTOR CONTROL POWER. PROVIDE COMPLETE SHOP DRAWING OF SYSTEM COMPONENTS AND WIRING DIAGRAMS.

ABBREVIATIONS:

- DS - DIMMER SWITCH FOR MANUAL ON/ OFF CONTROL AND FULL RANGE 0-10 VOLT DIMMING (SEE SYMBOL LIST FOR TYPE)
- DT - DUAL TECHNOLOGY (PIR/ US)
- PIR - PASSIVE INFRARED MOTION DETECTION
- US - ULTRASOUND MOTION DETECTION
- TC - TIME CLOCK
- WP - WEATHERPROOFWS
- WS - WALL SWITCH FOR MANUAL LOCAL ON/ OFF CONTROL (SEE SYMBOL LIST FOR TYPE)
- UNO - UNLESS NOTED OTHERWISE

SYMBOL LEGEND

- CONTROL SYSTEM TYPE (SEE SCHEDULE)
- SUBSCRIPT INDICATES NUMBER OF ZONES/RELAY POLES (1 POLE IF BLANK)

REVISION 1	BY
PERMIT COMMENTS	
REVISION 2	
ADDENDUM #2	

Professional Certification
I certify that these documents were prepared or approved by me, and that I am duly licensed Professional Engineer under the laws of the State of Maryland, license number 22792, expiration date August 04, 2020.

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ELECTRICAL SCHEDULES