



ELECTRICAL DEMOLITION PLAN - (WEST)

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DEMOLITION GENERAL NOTES

- A. THESE PLANS INDICATE MAJOR ITEMS OF DEMOLITION IN THE PROJECT AND ARE NOT INTENDED TO INDICATE ALL DEMOLITION REQUIRED TO COMPLETE THE WORK. REMOVE ITEMS INDICATED ON DEMOLITION SHEETS AND ADDITIONAL ITEMS AS REQUIRED FOR DEMOLITION WORK. DEMOLITION SHALL BE COMPLETE INCLUDING, BUT NOT LIMITED TO, REMOVAL OF DESIGNATED EQUIPMENT AND ASSOCIATED CONDUIT, CABLES, CONDUCTORS, BOXES, DEVICES, MOUNTING HARDWARE, ETC. PATCH AND
- CONDUCTORS, BOXES, DEVICES, MOUNTING HARDWARE, ETC. PATCH AND REPAIR WALLS AS REQUIRED TO MATCH THE ADJACENT WALL FINISH.
  B. REMOVE ALL DEVICES AND FIXTURES AND ALL ASSOCIATED WIRING AND EXPOSED CONDUIT, IN WALLS AND CEILING SPACES WHICH ARE BEING REMOVED. MAINTAIN CIRCUIT CONTINUITY FOR ALL DEVICES, EQUIPMENT,
- AND FIXTURES WHICH REMAIN.C. FLUORESCENT LAMPS THAT ARE REMOVED SHALL BE BOXED AND RECYCLED IN ACCORDANCE WITH FEDERAL AND STATE ENVIRONMENTAL GUIDELINES.
- D. FLUORESCENT BALLASTS THAT ARE MARKED AS "CONTAINS NO PCB'S" SHALL BE DISPOSED OF BY THIS CONTRACTOR. BALLASTS THAT CONTAIN PCB'S OR THAT ARE NOT MARKED "CONTAINS NO PCB'S" SHALL BE BOXED AND/OR PALLETIZED AND RECYCLED IN ACCORDANCE WITH FEDERAL AND STATE ENVIRONMENTAL GUIDELINES.
- E. EXISTING COMMUNICATIONS, COMPUTER NETWORKING, OR OTHER SPECIAL SYSTEMS CABLES SHALL BE SECURED AND PROTECTED DURING CONSTRUCTION. ANY CABLE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER (THE ENTIRE CABLE SHALL BE REPLACED AND TESTED FOR PROPER OPERATION IN THE PRESENCE OF THE OWNER).
- F. OWNER SHALL HAVE FIRST SALVAGE RIGHTS FOR ALL FIXTURES, EQUIPMENT, DEVICES, PANELS, ETC. BEING REMOVED. CONTRACTOR SHALL DISPOSE OF ALL ITEMS NOT SALVAGED BY OWNER.
- G. ALL ABANDONED COMMUNICATIONS CABLING, CONDUIT/RACEWAYS, DEVICES, AND EQUIPMENT SHALL BE REMOVED. PATCH AND COVER SURFACES AS REQUIRED TO MATCH EXISTING SURFACE.



- (#) <u>SHEET NOTES</u>
- EXISTING RTU TO BE REMOVED. REMOVE ELECTRICAL CONNECTION AND DISCONNECT SWITCH. REMOVE EXISTING CONDUCTORS BACK TO THEIR SOURCE. EXISTING CONDUIT SHALL REMAIN AND BE REUSED. REMOVE EXISTING DUCT SMOKE DETECTORS AND ASSOCIATED SHUTDOWN RELAYS, EXISTING FIRE ALARM CIRCUIT TO REMAIN AND BE REUSED.
- 2. FIXTURES ARE INSTALLED IN COVE AREA WITH LENS COVERING OPENING. REMOVE LENS AND REINSTALL AFTER NEW FIXTURE ARE INSTALLED. PROTECT LENS THROUGHOUT CONSTRUCTION. (TYPICAL)











LIGHTING PLAN - (WEST)



# LIGHTING GENERAL NOTES

- A. CONNECT EXIT LIGHTS, EMERGENCY POWER SUPPLY UNITS, EMERGENCY BATTERY UNIT FIXTURES, AND NIGHTLIGHT (NL) INDICATED FIXTURES UNSWITCHED TO THE NEAREST EXISTING
- EMERGENCY CIRCUIT. B. CONNECT EMERGENCY (HATCHED) FIXTURES TO THE NEAREST EXISTING EMERGENCY CIRCUIT.
- C. CONNECT NON-EMERGENCY (NORMAL) FIXTURES TO THE NEAREST EXISTING NORMAL LIGHTING CIRCUIT IN THE ROOM / AREA. CONNECT LIGHTING CIRCUITS THROUGH LIGHTING CONTROLS WITHIN EACH ROOM TO CONTROL LIGHT FIXTURES, UNLESS NOTED OTHERWISE.
- D. LOCATE REMOTE DRIVERS, WHERE PRESENT, FOR LUMINARIES ABOVE THE NEAREST ACCESSIBLE CEILING, UNLESS NOTED OTHERWISE. WHERE INDICATED, SUBSCRIPTS ON LIGHTING CONTROL DEVICES
- INDICATED CONTROL OF LUMINARIES WITH CORRESPONDING SUBSCRIPTS WITHIN THE SAME ROOM. WHERE DIMMING IS INDICATED, PROVIDED A DEDICATED LOAD
- CONTROLLER OR EACH LIGHT FIXTURE TYPE WITHIN A ZONE. WHERE LOW-VOLTAGE LIGHTING CONTROL WIRING IS REQUIRED BETWEEN DEVICES, IT SHALL BE PROVIDED PER MANUFACTURER'S INSTRUCTIONS. ROUTE CABLING ALONG ASSOCIATED LIGHTING CIRCUIT CONDUIT AND SUPPORT USING PLASTIC TIES OR VELCRO
- STRAPS. 0-10V WIRING SHALL BE INSTALLED IN CONDUIT. H. MOTION SENSORS SHALL BE INSTALLED A MINIMUM 6FT FROM HVAC DIFFUSERS. FIELD COORDINATE. MOTION SENSORS ARE INDICATED SCHEMATICALLY FOR
- COORDINATION AND ARE A MINIMUM. PROVIDE ADDITIONAL SENSORS AS REQUIRED FOR ROOM COVERAGE. CONNECT MOTION SENSORS WITHIN A ROOM. UNLESS NOTED OTHERWISE. J. LOAD CONTROLLERS ARE INDICATED ON THE PLANS
- DIAGRAMMATICALLY FOR DRAWING CLARITY. LOCATE LOAD CONTROLLERS ABOVE AN ACCESSIBLE CEILING OR ADJACENT TO SOURCE PANEL OF ASSOCIATED NORMAL CIRCUITS. LOAD CONTROLLERS ARE PERMITTED TO BE INSTALLED IN FINISHED SPACES WITH EXPOSED CEILING WHERE APPROVED BY THE DESIGN TEAM.

KEY PLAN

#	SHEET NOTES
1.	CONNECT TO EXISTING LIGHTING CIRCUIT THAT PREVIOUSLY SERVED THI (TYPICAL).
2.	CONNECT TO EXISTING EMERGENCY CIRCUIT THAT PREVIOUSLY SERVED AREA. (TYPICAL).
3.	CONNECT TO NEAREST AVAILABLE EMERGENCY CIRCUIT, FIELD VERIFY.
4.	INSTALL FIXTURE IN COVE IN SIMILAR LOCATION AS DEMOLISHED FIXTURE CONNECT NON-HATCHED FIXTURES TO EXISTING NORMAL CIRCUIT. CONN HATCHED FIXTURES TO EXISTING EMERGENCY CIRCUIT. FIELD VERIFY. (TY THIS ROOM / AREA AND OTHER SIMILAR ROOMS / AREAS).
5.	INSTALL FIXTURE IN COVE IN SIMILAR LOCATION AS DEMOLISHED FIXTURE CONNECT TO EXISTING NORMAL CIRCUIT. AIM UP TO EVENLY LIGHT ANGLI PORTION ABOVE. FIELD VERIFY. (TYPICAL OF THIS TYPE).
6.	INSTALL FIXTURE IN COVE IN SIMILAR LOCATION AS DEMOLISHED FIXTURE CONNECT TO EXISTING CIRCUIT. REINSTALL LENS OVER COVE OPENING S PREVIOUS INSTALLATION. (TYPICAL OF FIXTURES IN WOMEN 037 & MEN 03

- WORK SHOWN IN THIS AREA IS BASED ON LIMITED EXISTING DRAWINGS AND CASUAL FIELD OBSERVATION AND IS FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL
- FIELD VERIFY AND NOTIFY DESIGN TEAM OF ANY CONFLICTS. 8. COORDINATE WITH THE OWNER ON LOCATION OF LIGHTING CONTROL IN COURT
- ROOMS. (TYPICAL) 9. PROVIDE DIMMER SWITCH COMPATIBLE WITH NEW LIGHT FIXTURE. LEVITON AWSMT OR EQUAL. (TYPICAL).

NORTH



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INECT (TYPICAL OF

IE WALL

G SIMILAR TO







1 POWER E2.0 SCALE: 1/8" = 1'-0'

POWER PLAN - (WEST)



A. PROVIDE TEMPORARY POWER, LIGHTING, AND HEATING AS REQUIRED

- FOR CONSTRUCTION. COORDINATE WITH THE GENERAL CONTRACTOR AND OTHER TRADES.B. FIRE SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS, CEILING
- AND FLOORS. C. COORDINATE LOCATION OF WIRING DEVICES, TELECOM OUTLETS, FIRE ALARM DEVICES, ETC. WITH MILLWORK, TILE LAYOUT, AND OTHER WALL FINISHES PRIOR TO ROUGH-IN.
- D. ALIGN ADJACENT WALL MOUNTED OUTLET BOXES FOR SWITCHES, THERMOSTATS, AND SIMILAR DEVICES. DEVICES SHALL BE ALIGNED VERTICALLY WHEN INSTALLED AT DIFFERING HEIGHTS AND INSTALL ALL ADJACENT DEVICES AT THE SAME HEIGHT TO CENTER. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN TRADES PRIOR TO ROUGH-IN.
- E. CONCEAL ALL CONDUITS IN WALLS, CHASES, ABOVE CEILINGS, BELOW FLOOR, OR IN ADJACENT STORAGE OR UNFINISHED SPACES, WHERE POSSIBLE. RUN EXPOSED CONDUITS VERTICALLY, WHERE POSSIBLE, TO ABOVE ACCESSIBLE CEILING, CONNECT HORIZONTALLY ABOVE CEILING.
- F. PROVIDE TAMPER RESISTANT RECEPTACLES WHERE REQUIRED BY THE NEC.
- G. UTILIZE EXISTING CONCEALED CONDUIT AND FLUSH MOUNTED BOXES WHERE POSSIBLE.
- H. INSTALL NEW DEVICES IN EXISTING BACKBOX WHERE POSSIBLE. REUSE CONDUIT/SURFACE RACEWAY AS AVAILABLE. PROVIDE GANGED COVERPLATE AND/OR BLANK COVERPLATES AS REQUIRED.
- I. POWER TO EXISTING AREAS NOT WITHIN THE SCOPE OF THIS PROJECT SHALL BE MAINTAINED AT ALL TIMES EXCEPT FOR SHORT TERM OUTAGES NECESSARY FOR RECONNECTION OF EXISTING CIRCUITS, COORDINATE AND SCHEDULE OUTAGES WITH THE OWNER.

# (#) <u>SHEET NOTES</u>

PANELS.

KEY PLAN

- 1. CONNECT TO THE EXISTING SWITCH IN EXISTING PANEL PPH-C THAT SERVED PREVIOUS UNIT. PROVIDE NEW 110A FUSES. INSTALL THE NEW WIRING IN THE EXISTING CONDUIT, EXTEND / MODIFY THE CONDUIT AS REQUIRED FOR CONNECTION TO NEW UNIT. COORDINATE THE EXACT LOCATION OF THE DISCONNECT SWITCH WITH THE UNIT, DO NOT MOUNT TO EQUIPMENT ACCESS
- 2. APPROXIMATE LOCATION OF EXISTING ROOFTOP RECEPTACLE, RECEPTACLE SHALL REMAIN.
- PROVIDE NEW DUCT MOUNTED SMOKE DETECTORS. PROVIDE WITH NEW FIRE ALARM SHUTDOWN RELAYS AND CONNECT TO RTU AND FIRE ALARM SYSTEM. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS.



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MISC. ELECTI	RICAL SYMBOLS	POWER SYM	BOLS
1	PLAN OR DETAIL NOTE IDENTIFICATION		DUPLEX CONVENIENCE RECEPTACLE
XX			
	SURFACE MOUNTED RACEWAY,	<b>D</b>	SPECIAL OUTLET OR CONNECTION, SEE NOTES
1 1	TYPE AS NOTED, WITH DEVICES AS INDICATED		
A-1	DESIGNATION, NUMBER INDICATES CIRCUIT		DISCONNECT SWITCH - NON FLISED
	CONDUIT CONCEALED IN WALLS OR CEILING, CROSSHATCHES INDICATE NUMBER OF CONDUCTORS EXCEPT NO CROSSHATCHES INDICATE 2		SURFACE MOUNTED PANELBOARD
//· <	CONDUCTORS (GROUND WIRES ARE NOT SHOWN)	<u></u>	RECESSED MOUNTED PANELBOARD
EM-	EMERGENCY POWER AND LIGHTING CIRCUIT	//////	DISTRIBUTION PANEL
	CONDUIT DOWN		SWITCHBOARD
0	CONDUIT UP		
	EXISTING CONDUIT, VERIFY EXACT LOCATION		
		FIRE ALARM	SYMBOLS
LIGHTING SYI	MBOLS	Ø	
O#	RECESSED OR SURFACE MOUNTED LIGHT FIXTURE, NUMBER = TYPE, LETTER = SWITCH	D	
() #	HATCHING INDICATES EMERGENCY LIGHT FIXTURE, NUMBER = TYPE	ABBREVIATIO	ONS
Ю <sub>#</sub>	WALL MOUNTED LIGHT FIXTURE, NUMBER = TYPE	A	AMPERES
• #	LIGHT FIXTURE, NUMBER = TYPE	AFF	ABOVE FINISHED FLOOR
#	HATCHING INDICATES EMERGENCY LIGHT FIXTURE, NUMBER = TYPE	ATS	AUTOMATIC TRANSFER SWITCH
⊢⊌	WALL MOUNTED LINEAR LIGHT FIXTURE, NUMBER = TYPE	AWG	AMERICAN WIRE GAUGE
<b></b> #	LINEAR LIGHT FIXTURE, NUMBER = TYPE	BD	BOARD
∞ #	SINGLE FACED EXIT LIGHT, NUMBER = TYPE, HATCH INDICATES ILLUMINATED FACE, ARROW = CHEVRON DIRECTION	С	CONDUIT
<b>(</b> #	DOUBLE FACED EXIT LIGHT, NUMBER = TYPE, HATCH INDICATES ILLUMINATED FACE,	CU	COPPER
 4₽ #		E	INDICATES EXISTING TO REMAIN
		EM	EMERGENCY
ы Со К		EMT	ELECTRICAL METALLIC TUBING
ω <sub>P</sub>		FACP	FIRE ALARM CONTROL PANEL
ω <sub>KP</sub>	REYED SWITCH WITH LIGHTED HANDLE FOR PILOT	GND	GROUND
5, 5, 5, 5,	SINGLE POLE SWITCH, 3-WAY SWITCH AND 4-WAY SWITCH	NEC	NATIONAL ELECTRICAL CODE
D		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
	CEILING MOUNTED OCCUPANCY SENSOR	NL	NIGHT LIGHT, CONNECT TO UNSWITCHED LIGHTING CIRCUIT
		Р	POLE
		PNL	PANELBOARD
		PVC	POLY VINYL CHLORIDE NON-METALLIC RACEWAY, SCHEDULE 40 OR SCHEDULE 80
s,	LOW-VOLTAGE SWITCH, WHERE PRESENT, LETTER INDICATES LIGHTING CONTROL ZONE.	R	REMOVE EQUIPMENT, INCLUDING MOUNTING HARDWARE, AND AND CONDUCTORS TO SOURCE OF SUPPLY, UNLESS OTHERW
∟a	SEE LIGHTING CONTROL SCHEDULE.	RL	REMOVE AND RELOCATE ITEM. EXTEND EXISTING CONDUIT AN AS REQUIRED TO NEW LOCATION, UNLESS OTHERWISE NOTED SEE PLANS FOR NEW LOCATION.
		RR	REMOVE AND REPLACE WITH NEW DEVICE. REUSE BOX AND C WALL AND PROVIDE NEW CONDUIT AND WIRING TO DEVICE AS
		RMC	STEEL RIGID METAL CONDUIT



A. UL924 LISTED DEVICE. B. PROVIDE DEVICE COMPATIBLE WITH LIGHTING CONTROLS AND DIMMING PROTOCOL BEING PROVIDED.

C. INSTALL DEVICE ABOVE AN ACCESSIBLE CEILING OR ADJACENT TO SOURCE PANEL. REFER TO MANUFACTURER'S INSTALLATION REQUIREMENTS.

D. REFER TO THE LIGHTING CONTROL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

# EMERGENCY LIGHTING RELAY DETAIL

E3.0 NO SCALE

(WHERE REQUIRED)

RTU ROOF TOP UNIT

SS SWBD

TYP

V

W

WG

WP

XFMR

STAINLESS STEEL

SWITCHBOARD

TYPICAL

VOLTS

WIREGUARD

TRANSFORMER

INDICATES WEATHERPROOF

WATT



1. FIELD VERIFY EXISTING CONTROLS AND COORDINATE ORDER OF OPERATIONS WITH THE OWNER.

#### HARDWARE, AND CONDUIT INLESS OTHERWISE NOTED TING CONDUIT AND/OR CABLING THERWISE NOTED.

USE BOX AND CONDUIT IN G TO DEVICE AS REQUIRED

0-10V DIMMING WIRES, WHERE REQUIRED 20A NORMAL HOT NORMAL PANEL NORMAL NEUTRAL

\* LIGHTING CONTROL DEVICE MAY BE RELAY, POWER PACK, SENSOR,

1BE
1C
1D
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NOTES 1

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TYPE

						EQUIPMEN	CONNECTION S	SCHEDULE		
EQUIP.	DESCRIPTION	KW	HP	VOLTS	PHASE	WIRING	DISCONNECT SWITCH	MOTOR STARTER	CONNECTION	NOTES
RTU-1	ROOF-TOP UNIT	-	-	480	3Ø	3 - #2 #6 GND	200-AMP FUSIBLE NEMA 3R	-	DIRECT	REUSE EXISTING CONDUIT THAT FED PREVIOUS UNIT.
RTU-2	ROOF-TOP UNIT	-	-	480	3Ø	3 - #2 #6 GND	200-AMP FUSIBLE NEMA 3R	-	DIRECT	REUSE EXISTING CONDUIT THAT FED PREVIOUS UNIT.
RTU-3	ROOF-TOP UNIT	-	-	480	зø	3 - #2 #6 GND	200-AMP FUSIBLE NEMA 3R	-	DIRECT	REUSE EXISTING CONDUIT THAT FED PREVIOUS UNIT.
RTU-4	ROOF-TOP UNIT	-	-	480	3Ø	3 - #2 #6 GND	200-AMP FUSIBLE NEMA 3R	-	DIRECT	REUSE EXISTING CONDUIT THAT FED PREVIOUS UNIT.
RTU-1 (VIAERO)	ROOF-TOP UNIT (VIAERO BUILDING)	-	-	480	зø	-	INTEGRAL	-	DIRECT	REUSE EXISTING CIRCUIT THAT FED PREVIOUS UNIT.
GENERAL NOT										
Α.	LOW VOLTAGE HVAC CONTROL WIRING SHA	ALL BE BY T	HE MECHAN	ICAL CONT	RACIORUN	LESS OTHERWISE NOTED.				

			L	IGHT F	IXTU	RE SCHEDULI	E			
	DESCRIPTION	LAMP TYPE	LUMENS	COLOR TEMP	WATTS	MOUNTING	MANUFACTURER	CATALOG NUMBER	ACCEPTABLE MANUFACTURERS	NOTES
	2X4 FLAT PANEL, 0-10V DIMMING	LED	4,000	3500K	26W	RECESSED	LITHONIA	CPX-2X4-AL08-80CRI-SWW7-SWL-MVOLT	METALUX COLUMBIA DAYBRITE	-
	2X4 FLAT PANEL, 0-10V DIMMING	LED	5,000	3500K	36W	RECESSED	LITHONIA	CPX-2X4-AL08-80CRI-SWW7-SWL-MVOLT	METALUX COLUMBIA DAYBRITE	-
	2X4 FLAT PANEL, 0-10V DIMMING, WITH GENERATOR TRANSFER DEVICE	LED	5,000	3500K	40W	RECESSED	LITHONIA	CPX-2X4-AL08-80CRI-SWW7-SWL-MVOLT-GTD	METALUX COLUMBIA DAYBRITE	-
	2X4 FLAT PANEL, 0-10V DIMMING	LED	6,000	3500K	42W	RECESSED	LITHONIA	CPX-2X4-AL08-80CRI-SWW7-SWL-MVOLT	METALUX COLUMBIA DAYBRITE	-
	2X4 FLAT PANEL, 0-10V DIMMING, WITH DRYWALL GRID ADAPTER	LED	4,000	3500K	26W	RECESSED	LITHONIA	CPX-2X4-AL08-80CRI-SWW7-SWL-MVOLT-DGA24	METALUX COLUMBIA DAYBRITE	-
	2X2 FLAT PANEL, 0-10V DIMMING	LED	3,200	3500K	31W	RECESSED	LITHONIA	CPX-2X2-AL07-80CRI-SWW7-SWL-MVOLT	METALUX COLUMBIA DAYBRITE	-
	2X2 FLAT PANEL, 0-10V DIMMING, WITH GENERATOR TRANSFER DEVICE	LED	4,000	3500K	37W	RECESSED	LITHONIA	CPX-2X2-AL07-80CRI-SWW7-SWL-MVOLT-GTD	METALUX COLUMBIA DAYBRITE	-
	2X2 FLAT PANEL, 0-10V DIMMING	LED	4,000	3500K	37W	RECESSED	LITHONIA	CPX-2X2-AL07-80CRI-SWW7-SWL-MVOLT	METALUX COLUMBIA DAYBRITE	-
	2X2 FLAT PANEL, 0-10V DIMMING, WITH GENERATOR TRANSFER DEVICE	LED	4,000	3500K	37W	RECESSED	LITHONIA	CPX-2X2-AL07-80CRI-SWW7-SWL-MVOLT-GTD	METALUX COLUMBIA DAYBRITE	-
	2X2 FLAT PANEL, 0-10V DIMMING, WITH DRYWALL GRID ADAPTER	LED	3,200	3500K	31W	RECESSED	LITHONIA	CPX-2X2-AL07-80CRI-SWW7-SWL-MVOLT-DGA22	METALUX COLUMBIA DAYBRITE	-
	4FT STRIP LIGHT, WHITE FINISH, WITH WIREGUARD	LED	3,000	3500K	27W	SUSPENDED	LITHONIA	CSS-L48-AL03-MVOLT-SWW3-80CRI-HC36M12-WG CSS	METALUX COLUMBIA DAYBRITE	-
	4FT STRIP LIGHT, WHITE FINISH, WITH WIREGUARD	LED	4,000	3500K	36W	SUSPENDED	LITHONIA	CSS-L48-AL03-MVOLT-SWW3-80CRI-HC36M12-WG CSS	METALUX COLUMBIA DAYBRITE	-
	2FT STRIP LIGHT, WHITE FINISH, WITH WIREGUARD	LED	2,000	3500K	17W	SUSPENDED	LITHONIA	CSS-L24-AL015-MVOLT-SWW3-80CRI-HC36M12-WG CSS	METALUX COLUMBIA DAYBRITE	-
	8FT STRIP LIGHT, WHITE FINISH, WITH WIREGUARD	LED	8,000	3500K	65W	STEM	LITHONIA	CSS-L96-AL04-MVOLT-SWW3-80CRI-WGCSS	METALUX COLUMBIA DAYBRITE	1
	4FT STRIP LIGHT, WHITE FINISH	LED	4,000	3500K	35W	SURFACE, COVE	LITHONIA	CSS-L48-AL03-MVOLT-SWW3-80CRI	METALUX COLUMBIA DAYBRITE	-
	2FT STRIP LIGHT, WHITE FINISH	LED	2,000	3500K	17W	SURFACE, COVE	LITHONIA	CSS-L24-AL015-MVOLT-SWW3-80CRI	METALUX COLUMBIA DAYBRITE	-
	4FT STRIP LIGHT, WHITE FINISH	LED	3,000	3500K	27W	SURFACE, COVE	LITHONIA	CSS-L48-AL03-MVOLT-SWW3-80CRI	METALUX COLUMBIA DAYBRITE	-
	4FT STRIP LIGHT, WHITE FINISH, ROUND DIFFUSE LENS	LED	3,000	3500K	19W	SURFACE, COVE	LITHONIA	CLX-L48-3000LM-SEF-RDL-MVOLT- GZ10-35K-80CRI-WH	METALUX COLUMBIA DAYBRITE	-
	3FT STRIP LIGHT, WHITE FINISH, ROUND DIFFUSE LENS	LED	2,250	3500K	17W	SURFACE, COVE	LITHONIA	CLX-L36-2250LM-SEF-RDL-MVOLT- GZ10-35K-80CRI-WH	METALUX COLUMBIA DAYBRITE	-
	ASYMMETRIC LINEAR FIXTURE, 4FT LENGTH, WITH ADJUSTABLE BRACKET, CONNECTORS AS REQUIRED	LED	2,800	3500K	32W	SURFACE	ECOSENSE	L50-I-48"-08-80-MULT-ASYM	-	2
	UP/DOWN LINEAR FIXTURE, SPAN MOUNTING, WHITE FINISH, 7'-7" TOTAL LENGTH	LED	555 UP 575 DN	3500K	75W	SPAN	A-LIGHT	ALD2ST-M(7'-7")ILS-DLS-35-80CRI-U-BW-HE-J-W-1- D-XX	-	3
	4X4 RECESSED FIXTURE, 0-10V DIMMING, VERIFY EXISTING GRID MOUNTING REQUIREMENTS	LED	7,000	3500K	67W	RECESSED	LUMENWERX	POSQR-4FTX4FT-ULO-FH-SW-80-7000-35-UNV-D1-1 -XX-W	-	-
	6IN RECESSED DOWNLIGHT, 0-10V DIMMING, WITH EMERGENCY BATTERY	LED	1,000	3500K	13W	RECESSED	LITHONIA	LBR6-AL02-SWW1-AR-LSS-MWD-MVOLT-UGZ-E10 WCP	HALO COMMERCIAL LIGHTOLIER PRESCOLITE	-
	6IN RECESSED DOWNLIGHT, 0-10V DIMMING	LED	2,000	3500K	25W	RECESSED	LITHONIA	LBR6-AL02-SWW1-AR-LSS-WD-MVOLT-UGZ	HALO COMMERCIAL LIGHTOLIER PRESCOLITE	-
	1X4 FLAT PANEL, 0-10V DIMMING, WITH DRYWALL GRID ADAPTER	LED	3,200	3500K	19W	RECESSED	LITHONIA	CPX-1X4-AL07-80CRI-SWW7-SWL-MVOLT	METALUX COLUMBIA DAYBRITE	-
	6IN RECESSED CANLESS DOWNLIGHT, WET LOCATION RATED	LED	1,110	3500K	14W	RECESSED	LITHONIA	WF6-LED-27K30K35K-90CRI-WH	HALO COMMERCIAL LIGHTOLIER ELITE	-
	4FT WRAPAROUND FIXTURE, WHITE FINISH	LED	4,000	3500K	49W	SURFACE	LITHONIA	FML4W-48-AL06-SEF-835-MVOLT	METALUX COLUMBIA DAYBRITE	-
	RECESSED PERIMETER FIXTURE, 12FT LENGTH, WHITE FINISH, SHALLOW REGRESSED LENS, VERIFY EXISTING CEILING MOUNTING REQUIREMENTS	LED	500LM/FT	3500K	54W	RECESSED	LUMENWERX	V5PERS-HLO-SW-80CRI-500LMF-35K-(12'-0")-UNV- D1-1C-XX-W	FOCAL POINT AXIS LEDALITE	-
	4" RECESSED HIGH ABUSE SEALED DOWNLIGHT	LED	1,200	3500K	11W	RECESSED	KENALL	HADL4-FF-2FW-11L-35K9-FW-G-RIG4-277-DIM1	-	-
	MEDIUM SECURITY 2X4 RECESSED TROFFER, WHITE FINISH, 0.125" PRISMATIC ARCLYIC INTERNAL LENS, 0.375" CLEAR POLYCARBONATE EXTERNAL LENS	LED	4,500	3500K	39W	RECESSED	LC DOANE	CRC-24-2W43-35-80-D-C-W-VAR-DM-53-36-TP-D	-	-
	MEDIUM SECURITY 2X4 RECESSED TROFFER, WHITE FINISH, 0.125" PRISMATIC ARCLYIC INTERNAL LENS, 0.375" CLEAR POLYCARBONATE EXTERNAL LENS, WITH AMBER NIGHT LIGHT	LED	4,500	3500K	39W	RECESSED	LC DOANE	CRC-24-2W43-35-80-D-C-W-VAR-DM-53-36-TP-D-NL -LED (AMBER)	-	4
	MAXIMUM SECURITY WALL BRACKET FIXTURE, 2FT LENGTH, UP/DOWN LIGHT, WHITE FINISH, 0.125" PRISMATIC ARCLYIC INTERNAL LENS, 0.375" CLEAR POLYCARBONATE EXTERNAL LENS	LED	1,550 UP 1,550 DN	3500K	35W	WALL MOUNTED	LC DOANE	SJ-2-1W15/1W15-35K-80CRI-X-C-W-WAR- DM-53-36-TP-K-D	-	-
	MAXIMUM SECURITY WALL BRACKET FIXTURE, 4FT LENGTH, UP/DOWN LIGHT, WHITE FINISH, 0.125" PRISMATIC ARCLYIC INTERNAL LENS, 0.375" CLEAR POLYCARBONATE EXTERNAL LENS	LED	1,675 UP 1,675 DN	3500K	34W	WALL MOUNTED	LC DOANE	SJ-4-1W17/1W17-35K-80CRLX-C-W-WAR- DM-53-36-TP-K-D	-	-
	MAXIMUM SECURITY WALL BRACKET FIXTURE, 4FT LENGTH, UP/DOWN LIGHT, WHITE FINISH, 0.125" PRISMATIC ARCLYIC INTERNAL LENS, 0.375" CLEAR POLYCARBONATE EXTERNAL LENS, WET LOCATION RATED	LED	1,675 UP 1,675 DN	3500K	34W	WALL MOUNTED	LC DOANE	SJ-4-1W17/1W17-35K-80CRI-X-C-W-WAR- DM-53-36-TP-K-W	-	-
	MAXIMUM SECURITY SURFACE 1X4 FIXTURE, WHITE FINISH, 0.125" PRISMATIC ARCLYIC INTERNAL LENS, 0.375" CLEAR POLYARBONATE EXTERNAL LENS	LED	5,000	3500K	55W	SURFACE	LC DOANE	ST-4-1W52-35-80-X-C-W-VAR-DM-53-36-TP-K-D	-	-
	MAXIMUM SECURITY SURFACE 2X2 FIXTURE, WHITE FINISH, 0.125" PRISMATIC ARCLYIC INTERNAL LENS, 0.375" CLEAR POLYARBONATE EXTERNAL LENS	LED	7,900	3500K	69W	SURFACE	LC DOANE	SS-2-3L-35K-80CRI-X-C-W-VAR-DM-53-36-TP-K-D	-	-
	4FT UNDERCABINET LIGHT FIXTURE, WHITE FINISH	LED	1,800	3500K	20W	UNDERCABINET	ELITE	EU-LED-46-1800L-DIM10-MVOLT-35K-WH	-	-
	THERMOPLASTIC EXIT SIGN, SINGLE OR DOUBLE FACED, GREEN LETTERING, ARROWS	LED	-	-	-	UNIVERSAL		LQM-S-W-G-120/277	SURE-LITES DUAL-LITE CHLORIDE	-
	SELF-CONTAINED EMERGENCY WALL PACK WITH EMERGENCY BATTERY	LED	-	-	-	WALL MOUNTED	LITHONIA	ELM4L	SURE-LITES DUAL-LITE CHLORIDE	-
-	HIGH ABUSE / CORRECTIONAL RATED EXIT SIGN, RED LETTERING, WET LOCATION RATED	LED	-	-	-	WALL MOUNTED	LC DOANE	XTL-C-W-S-R-32-TP-W		-
_		-	-	-	-	-	-	-	<u>-</u>	-
_ N	IOTES:									
А	MOUNTING HEIGHT IS TO BOTTOM OF LIGHT FIXTURE. UNLESS NOTED OTHERWISE									

B. ALL FIXTURES SHALL BE 277V RATED, UNLESS OTHERWISE NOTED.

1. PROVIDE STEM LENGTH AS REQUIRED TO MATCH MOUNTING HEIGHT OF THE PREVIOUS FIXTURE(S). 2. PROVIDE MOUNTING HARDWARE, CONNECTOR CABLES, ACCESSORIES, ETC. AS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.

3. PER EXISTING DRAWINGS, THE CORRIDOR IS 7'-7" WIDE, FIELD VERIFY AND PROVIDE FIXTURE LENGTH AS REQUIRED TO SPAN CORRDIOR SIMILAR TO THE PREVIOUS FIXTURE(S). 4. COORDINATE WITH OWNER AND DESIGN TEAM ON EXACT NIGHTLIGHT AMBER SETTINGS PRIOR TO ORDERING.

B. EXHAUST FANS ARE FURNISHED WITH AN INTEGRAL DISCONNECTING MEANS, UNLESS NOTED OTHERWISE.



#### **DIVISION 26 - ELECTRICAL SECTION 260101** COMMON ELECTRICAL WORK

#### PART 1 GENERAL 1.01 SCOPE

A. This Section shall apply to all Contractors and Subcontractors that are responsible for Division 26,

- 27, and 28. B. The work covered by this Section of the Specifications consists of furnishing all labor and materials (unless otherwise specified) and in performing all operations necessary for the installation of the complete electronic and electrical system as required by terms and conditions of the Contract. The work shall also include the completion of such details of electrical work not mentioned or shown which are necessary for the successful operation of all electrical and electronic systems described on the drawings or required by these Specifications.
- C. The work in this Contract involves the installation of new work as well as work on the Site and may include demolition and renovation work. It shall be this Contractor's responsibility to visit the site so that he may ascertain all existing conditions which may affect the work under his Contract. No additional compensation will be granted for additional work required by this Contractor for his failure to visit the jobsite and determine existing conditions. This Contractor shall provide all labor and materials required to complete the work described in the Plans and Specifications and as may be required for a ready to operate installation.
- D. Generally the removal and repairing of existing floors, walls, ceilings, etc., in the remodeled areas where required for the installation of conduit, lights, panels, etc., shall be provided by the General Contractor under the direction of this Contractor. Holes required through floors, walls, and roof of the building shall be provided by this Contractor. If specifically shown to be done by this Contractor, this Contractor shall include in his Contract price the removal and replacement of general construction materials as required.

## 1.02 DRAWINGS

A. The drawings which constitute a part of this Contract indicate the general arrangement of circuits and outlets, locations of switches, panelboards, and other work. The Drawings and Specifications are complimentary each to the other, and what is called for by one shall be binding as if called for by both. Data presented on these drawings are as accurate as planning can determine, but accuracy is not guaranteed and field verification of all dimensions, locations, levels, etc., to suit field conditions is required. Review all Design Teamural, Structural, and Mechanical Plans and adjust all work to conform to all conditions shown therein. The Design Teamural Drawings shall take precedence over all other drawings as to dimensions.

## 1.03 CONFLICTS

- A. Any conflict noted between (1) the Drawings; (2) Specifications; or (3) Drawings and Specifications; or (4) between Plans and Codes or Ordinances or (5) between the Plans or Specifications and Manufacturer's installation recommendations shall be immediately brought to the attention of the Design Team for clarification. If conflicts are discovered prior to bidding and there is not sufficient time to obtain a clarification from the Design Team prior to bidding, the Contractor shall bid the larger quantity or better quality of work. All conflicts shall be brought to the attention of the Design Team when discovered and before installation.
- B. Contractor shall be responsible to field measure and confirm mounting heights and locations of electrical equipment with respect to counters, radiation, etc. Do not scale distances off the Electrical Plans. Use actual building dimensions from the Design Teamural Drawings.

## 1.04 WORK IN EXISTING BUILDINGS

- A. All work in existing buildings, indicated on the drawings or specified herein, shall be executed with a minimum amount of interference with the normal activities of the occupants of the building. No services or utilities shall be interrupted without previous scheduling time of the same with the Owner and receipt of his approval. Changing of the electrical system, telephone system, and other major events shall be arranged and be agreeable with the Owner to length and time of downtime. All work shall be scheduled in advance with the Owner and shall not proceed without the Owner's written approval.
- B. Work in areas such as the court rooms, offices, clerk areas, offices, police areas may need to occur after regular business hours in order for the spaces to be used during normal business hours. Where after-hour work occurs, contractor shall clean and neatly organize the spaces after work is completed for normal operations. Coordinate with the Owner on exact requirements.
- C. The Owner shall be notified before starting to weld or cut. Fire extinguishers shall be immediately accessible when welding or cutting with an open flame or arc. Welding or cutting with an open flame or arc must be stopped in a timely fashion before leaving premises. D. Noisy operations such as those involving use of air hammers, etc., in demolition, or cutting of
- openings shall be scheduled with the Owner.
- E. Typically, the Owner will continue to occupy the building and carry on normal activity. Each Contractor shall protect the occupied areas from dust, smoke, etc., by a method approved by the Owner/Design Team.

## 1.05 EXAMINATION OF SITE

- A. Prior to submitting a bid, this Contractor shall visit the site of the job and ascertain all conditions affecting the proposed electrical installation and make provisions as to the cost thereof. No additional compensation will be granted for additional work required by this Contractor for failure to visit jobsite and determine existing conditions. The Contractor shall verify location and size of existing systems that are to be connected to, routed around, or extended from.
- B. The Contractor shall verify with the City and Utility Companies, and Owner, etc., the location of any existing overhead or buried utilities on or near the site. The Contractor shall verify requirements for connecting into existing utilities with the City and Utility Company, and Owner and connect into as required. Failure to determine existing conditions or the nature of new connections will not be considered a basis for the granting of additional compensation.

## 1.06 PRIOR APPROVAL

- A. The Contractors attention is directed to the requirement of "prior approval" for materials to be supplied in this project if they are not specifically designated as a specified manufacturer or approved equal.
- B. Prior approval requires that literature be submitted to the Design Team a minimum of ten (10) days prior to the bidding date. This submitted material shall be informative enough to allow the Engineer to give approval. This approval is a tentative approval and does not imply anything but approval to

## 1.07 SHOP DRAWINGS

- A. The Contractor shall submit five (5) copies of Shop Drawings and Product Data to the Design Team/Engineer for approval or submit digital information on Submittal Exchange or other approved digital documenting system. Stamp, Date, and Sign each submittal to indicate submittal is in conformance with requirements of the Contract Documents. Shop Drawings shall be submitted for the following items: 1. Wiring Devices and Cover Plates
- Luminaires
- Lighting Control Devices, Layout Drawings, and Functional Testing Reports. 4. Enclosed Switches
- 5. Fire Alarm Equipment and Layout Drawings (Must be Stamped and Signed by the Fire Marshal) 1.08 USE OF OTHER THAN SPECIFIED EQUIPMENT
- A. All equipment shown on the drawing shall be specified equipment. If the Contractor uses different approved equipment than what was specified, all additional work or components required to make an operable system shall be made without additional cost to the Owner. The Contractor shall be held responsible for selecting different approved equipment so that equipment will fit into the available space provided for the specified equipment. 1.09 PERMITS AND LICENSES

A. Obtain and pay all permits and licenses required and furnish the Design Team for the Owner a certificate of final inspection and approval from the Local Authority having jurisdiction over this electrical installation.

# 1.10 WARRANTY

A. The entire electrical system installed under this Contract shall be left in proper working order. Replace, without additional charge, any work or material (except materials not furnished by the Electrical Contractor) which develops defects from ordinary wear and tear within one (1) year from the date of acceptance, or provide extended warranty, as specified. All new material and equipment shall be warranted against defects in composition, design, or workmanship. Lamps shall be warranted for their published life. Warranty certificates shall be furnished on special equipment.

# 1.11 PROGRESS OF WORK AND DOWNTIME

A. Order the progress of the electrical work so as to conform to the progress of the work as scheduled in the Specifications and complete the entire installation as soon as the condition of the building will permit. Any cost resulting from defective or ill-timed work performed under this Section shall be borne by this Contractor.

#### B. As much of this building may be occupied when construction is ongoing it will be of prime importance to coordinate downtime of electrical systems with the Owner. Changing of the electrical entrance and other major events shall be arranged and be agreeable with the Owner to length and time of downtime

# 1.12 COORDINATION

- A. The Contractor shall confirm dimensions noted and locations of General and Mechanical Contractor's equipment as well as equipment to be furnished by the Owner. Verify all equipment and motor sizes, voltage and connection requirements for equipment furnished by others and wired under this Contract before roughing-in, and provide proper branch circuits and connections as recommended by equipment manufacturers. Coordinate with the other contractors to avoid interference with ductwork, structural members, grilles, cabinetwork, etc. Motors shall not be connected to until verification has been made that motor running protection exists.
- B. Where the drawings indicate fixtures and equipment which are to be furnished by others (or Owner) and which require connections to the electrical systems, the Electrical Contractor shall furnish and install all rough-in of conduit, boxes, conductors, disconnect switches, plugs with pigtails, receptacles etc., which are required for the final connections. Rough-in locations and required connections shall be determined from the equipment itself or from the equipment manufacturer's shop drawings. Final connections to the equipment shall be made by this Contractor.

# 1.13 CUTTING AND PATCHING

A. Each Contractor shall be responsible for all cutting and patching required for his work. Carefully lay out all work in advance and where cutting, channeling, chasing, or drilling of building surfaces is necessary for the proper installation of electrical equipment, carefully perform this work in a manner approved by the Design Team. Patching shall be done in a neat workmanlike manner by craftsmen skilled in the trade involved and shall be prepared to receive paint. Damaged surfaces shall be repaired at no cost to the Owner. Concrete walls shall be cut only with rotary type drilling tools. Openings through floors and walls may be drilled up to 1" but shall be cored over 1". Electrical equipment shall not be cut with torches, and shall be joined only by bolting (i.e., do not weld wireways to panels, etc.).

# 1.14 INDUSTRY STANDARDS AND CODES

- A. The complete installation shall comply with the applicable Local and State wiring ordinances, with the regulations of the latest edition of the National Electrical Code of the National Fire Protection Association (supplements and official interpretations included) and with the requirements of the Power, Television, and Telephone Companies furnishing service to this installation. The drawings and specifications take precedence when they are more stringent than codes, ordinances, or statutes in effect, and vice versa.
- B. All work shall be in accordance with State and Local Codes and requirements of Local Utilities. Where the applicable Building Codes and the drawings or specifications do not agree, the code shall take precedence, but only in cases where what is shown on the drawings or required by the specifications violates the code. Where there is a Code or Utility Company requirement and drawing or specification discrepancy the Code shall have precedence only when it is more stringent than the item specified or shown on the drawings. Items that are allowable by the Local Building Codes, which are less stringent than that required by the specifications or the drawings the less stringent work, shall not be substituted.

# 1.15 RESPONSIBILITY OF THE CONTRACTOR

- skilled in the trade and responsible for the work involved.
- 1.16 TEMPORARY POWER AND LIGHTING
- heating, and lighting in construction areas. 1.17 FIRE AND SMOKE STOPPAGE
- provided in and around as required by Codes. Mutual System approved.

# 1.18 ACCESS TO EQUIPMENT

- to Local Electric Codes. Access doors shall be provided if devices are concealed. 1.19 TESTS
- Design Team.
- Test for short circuits and grounds.
- 1.20 CLEAN-UP

## equipment that he installed clean and ready for operation. 1.21 QUALITY ASSURANCE

- A. Provide products listed, classified, and labeled as suitable for the purpose intended.
- for a complete and operating system(s). C. Install products in accordance with manufacturer's instructions. D. Perform work in accordance with NECA 1 (general workmanship).
- E. Clean exposed surfaces to remove dirt, paint, or other foreign materials. Restore factory finishes, where applicable.
- G. Comply with requirements of NFPA 70.
- Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdication.
- NEMA VE 2. J. Handle products carefully to avoid damage to finish.
- K. Install devices and equipment plumb and level. 1.22 RECORD DRAWINGS

  - separate categories of the work 2. Mark new information that is important to the Owner, but was not shown on Contract Drawings
  - or Shop Drawings 3. Note related Change Order numbers where applicable.

# END OF SECTION 260101

#### PART 1 GENERAL - NOT USED PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

# 3.01 EXAMINATION

- A. Verify that abandoned wiring and equipment serve only abandoned facilities. B. Demolition drawings are based on casual field observation and existing record documents. C. Report discrepancies to Engineer before disturbing existing installation. D. Beginning of demolition means installer accepts existing conditions. 3.02 PREPARATION A. Disconnect electrical systems in walls, floors, and ceilings to be removed. B. Coordinate utility service outages with utility company.
- C. Provide temporary wiring and connections to maintain existing systems in service during experienced in such operations.
- switchovers and connections. Minimize outage duration.
- switchovers and connections. Minimize outage duration. 1. Notify Owner before partially or completely disabling system. 2. Notify local fire service. 3. Make notifications at least 24 hours in advance.

# 3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

- PCB- and DEHP-containing lighting ballasts. incandescent
- C. Remove abandoned wiring to source of supply.
- finishes. Cut conduit flush with walls and floors, and patch surfaces.
- F. Disconnect and remove abandoned panelboards and distribution equipment.
- removed.
- accessories
- I. Repair adjacent construction and finishes damaged during demolition and extension work.
- J. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

# PART 1 GENERAL

- 1.01 ADMINISTRATIVE REQUIREMENTS A. Coordination:

  - for voltage drop. suitable for use with the conductors to be installed.
- PART 2 PRODUCTS 2.01 CONDUCTOR AND CABLE APPLICATIONS
- permitted, or required.
- B. Nonmetallic-sheathed cable is not permitted.

D. Minimum Conductor Size:

1. Branch Circuits: 12 AWG.

a. Exceptions:

- C. Underground feeder and branch-circuit cable is not permitted.
- D. Service entrance cable is not permitted. E. Armored cable is not permitted.
- F. Metal-clad cable is not permitted
- 2.02 CONDUCTOR AND CABLE GENERAL REQUIREMENTS A. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors,
- etc. as required for a complete operating system. B. Conductors and Cables Installed Exposed in Spaces Used for Environmental Air (only where C. Conductor Material:

1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.

specifically permitted): Plenum rated, listed and labeled as suitable for use in return air plenums.

A. Provide single conductor building wire installed in suitable raceway unless otherwise indicated,

2. Coordinate with electrical equipment installed under other sections to provide terminations

1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased

CONDUCTORS AND CABLES

END OF SECTION 260505 **SECTION 260519** 

G. Disconnect and remove electrical devices and equipment serving utilization equipment that has been H. Disconnect and remove abandoned luminaires. Remove brackets, stems, hangers, and other

D. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling E. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets that are not removed.

3. Mercury-containing lamps and tubes, including fluorescent lamps, high intensity discharge (HID), arc lamps, ultra-violet, high pressure sodium, mercury vapor, ignitron tubes, neon, and B. Remove, relocate, and extend existing installations to accommodate new construction.

A. Perform work for removal and disposal of equipment and materials containing toxic substances regulated under the Federal Toxic Substances Control Act (TSCA) in accordance with applicable federal, state, and local regulations. Applicable equipment and materials include, but are not limited PCB-containing electrical equipment, including transformers, capacitors, and switches.

E. Existing Fire Alarm System: Maintain existing system in service. Disable system only to make 4. Make temporary connections to maintain service in areas adjacent to work area.

construction. When work must be performed on energized equipment or circuits, use personnel D. Existing Electrical Service: Maintain existing system in service. Disable system only to make 1. Obtain permission from Owner at least 24 hours before partially or completely disabling system. 2. Make temporary connections to maintain service in areas adjacent to work area.

# **SECTION 260505** DEMOLITION FOR ELECTRICAL

4. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dated and other identification on the cover of each set. 5. Turn Record Drawings over to the Owner with the Operation and Maintenance Manuals.

A. Maintain a clean, undamaged set of whiteprints of Contract Drawings. Mark the set to show the actual installation where the installation varies from the work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date. 1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in

I. Receive, inspect, handle, and store products in accordance with manufacturer's instructions and

F. Correct wiring deficiencies and replace damaged or defective items as a result of demolition or new H. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally

B. Unless specifically indicated to be excluded, provide all required conduit, wiring, connectors, hardware, components, accessories, etc. as recommended by the manufacturer(s) and as required

A. The Contractor shall remove all rubbish and debris resulting from his work daily and shall leave

Test to prove correct operation of all equipment, including lighting control systems. Check for balance of load on phases, and connect load to balance as closely as possible. Should the Power Company disclose any unfavorable conditions or reactions on the service, the Contractor shall make changes as may be suggested to properly balance the load.

A. At the completion of his work, the Contractor shall perform the following tests in the presence of the

around, it shall be filled with a material that is UL Classified Standard 1479 for this use and Factory A. All control devices, specialties, pull boxes, disconnect switches, and similar equipment shall be so located as to provide for easy access for operation, repair and maintenance. Access shall conform

A. It shall be the responsibility of this Contractor to maintain the fire and smoke integrity of all walls, ceilings, floors etc., through which his work passes through or into. Fire and smoke barriers shall be B. Where holes are required to be patched, or conduit, piping, ducts, etc., are required to be patched

A. The Electrical Contractor shall provide electrical wiring and light fixtures for temporary power,

bracing and securing all parts of the work against the elements and shall, in all cases, judge as to the amount of protection required. Proper storage of material shall be maintained at all times.

in which work is being performed, and shall provide journeymen to work as superintendents and/or foremen on the project. All workmen shall be skilled in their trade or working under someone who is B. The Contractor shall be totally responsible for his portion of the work from the date of his Contract until final acceptance of the building by the Owner, and must repair all damage sustained without cost to the Owner regardless of cause. The Contractor shall use proper care and diligence in

A. The Contractor and his journeymen shall have Electrical Licenses, as required by the City and State

Control Circuits: 14 AWG. E. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified. F. Conductor Color Coding:

1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project. Color Coding Method: Integrally colored insulation

1. Copper Building Wire: Type THHN/THWN or THHN/THWN-2, except as indicated below.

A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors

Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.

2. Copper Conductors Size 6 AWG and Larger: Use mechanical connectors or compression

1. Provide terminal lugs for connecting conductors to equipment furnished with terminations

3. Copper Conductors Size 8 AWG and Larger: Use mechanical connectors or compression

2. Provide compression adapters for connecting conductors to equipment furnished with

mechanical lugs when only compression connectors are specified.

4. Conductors for Control Circuits: Use crimped terminals for all connections.

H. Compression Connectors: Provide circumferential type or hex type crimp configuration

neutral conductors are considered current-carrying conductors.

b. Increase size of conductors as required to account for ampacity derating.

Unless dimensioned, circuit routing indicated is diagrammatic.

c. Size raceways, boxes, etc. to accommodate conductors.

Pull all conductors and cables together into raceway at same time.

each termination and at each location conductors are accessible

pulling tension and sidewall pressure.

and methods specified in Section 078400.

2.01 GROUNDING AND BONDING REQUIREMENTS

grounding and bonding system.

C. Grounding Electrode System:

iumper

with NFPA 70.

a. Exceptions:

connector

torque settings.

2.01 SUPPORT AND ATTACHMENT COMPONENTS

surfaces

PART 1 GENERAL - NOT USED

A. General Requirements:

PART 2 PRODUCTS

PART 3 EXECUTION

3.01 INSTALLATION

D. Bonding and Equipment Grounding:

2.02 GROUNDING AND BONDING COMPONENTS

B. Connectors for Grounding and Bonding:

and other inaccessible connections.

minimum size requirements specified.

grounding electrode system

I. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for

D. Do not use insulation-piercing or insulation-displacement connectors designed for use with

E. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.

F. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and

302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with

When circuit destination is indicated without specific routing, determine exact routing required.

Circuiting Adjustments: Unless otherwise indicated, when branch circuits are indicated as

a. Provide no more than six current-carrying conductors in a single raceway. Dedicated

4. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among

permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.

3. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended

2. Do not damage conductors and cables or exceed manufacturer's recommended maximum

C. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and

structure. Do not provide support from raceways, piping, ductwork, or other systems.

methods approved by the authority having jurisdiction. Provide independent support from building

not provide support from ceiling grid or allow conductors and cables to lay on ceiling tiles.

D. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the

E. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally

application, with insulation and mechanical strength at least equivalent to unspliced conductors.

F. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials

G. Unless specifically indicated to be excluded, provide final connections to all equipment and devices,

END OF SECTION 260519

**SECTION 260526** 

**GROUNDING AND BONDING** 

connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete

B. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable

1. Provide connection to required and supplemental grounding electrodes indicated to form

1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic

Do not use raceways as sole equipment grounding conductor.

1. Use insulated copper conductors unless otherwise indicated.

exothermic welded connections for accessible connections.

be connected in accordance with manufacturer's recommendations.

as necessary for the complete installation of electrical work.

A. Make grounding and bonding connections using specified connectors

A. Conductors for Grounding and Bonding, in Addition to Requirements of Section 260526:

equipment enclosures, CT cabinets, meter sockets, metallic raceways and boxes, device

grounding terminals, and other normally non-current-carrying conductive materials enclosing

Provide insulated equipment grounding conductor in each feeder and branch circuit raceway.

Use bare copper conductors where installed underground in direct contact with earth.

2) Use bare copper conductors where directly encased in concrete (not in raceway).

1. Unless otherwise indicated, use exothermic welded connections for underground, concealed

Remove appropriate amount of conductor insulation for making connections without cutting.

2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact

3. Exothermic Welds: Make connections using molds and weld material suitable for the items to

Compression Connectors: Secure connections using manufacturer's recommended tools and

4. Mechanical Connectors: Secure connections according to manufacturer's recommended

END OF SECTION 260526

**SECTION 260529** 

HANGERS AND SUPPORTS

1. Provide all required hangers, supports, anchors, fasteners, fittings, accessories, and hardware

nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into

2. Unless otherwise indicated, use mechanical connectors, compression connectors, or

electrical conductors/equipment or likely to become energized as indicated and in accordance

b. Install grounding electrode conductors in raceway where exposed to physical damage.

Bond grounding electrode conductor to metallic raceways at each end with bonding

a. Provide continuous grounding electrode conductors without splice or joint.

including those furnished by others, as required for a complete operating system.

A. Unless specifically indicated to be excluded, provide all required components, conductors,

1. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do

colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape at

up to three single phase branch circuits of different phases installed in the same raceway is not

separate, combining them together in a single raceway is permitted, under the following

to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.

1) 20 A, 120 V circuits longer than 75 feet: 10 AWG, for voltage drop.

2) 20 A, 120 V circuits longer than 150 feet: 8 AWG, for voltage drop.

3) 20 A, 277 V circuits longer than 150 feet: 10 AWG, for voltage drop.

a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color

3. Color Code:

coding electrical tape. a. 480Y/277 V, 3 Phase, 4 Wire System:

- 1) Phase A: Brown. 2) Phase B: Orange.
- Phase C: Yellow.

4) Neutral/Grounded: White.

a. Size 10 AWG and Smaller: Solid.

b. Size 8 AWG and Larger: Stranded.

a. Size 4 AWG and Larger: Type XHHW-2.

b. Installed Underground: Type XHHW-2.

connectors where connectors are required.

G. Mechanical Connectors: Provide bolted type or set-screw type.

c. Equipment Ground, All Systems: Green.

d. Travelers for 3-Way and 4-Way Switching: Purple.

- 4) Neutral/Grounded: Gray.

Phase B: Red.

3) Phase C: Blue.

2.03 SINGLE CONDUCTOR BUILDING WIRE

1. Feeders and Branch Circuits:

2. Control Circuits: Stranded.

B. Wiring Connectors for Splices and Taps:

designed for terminal lugs.

conductors without stripping insulation.

UL 486D for damp and wet locations.

connection to be made.

A. Circuiting Requirements

conditions:

B. Installation in Raceway:

PART 1 GENERAL - NOT USED

PART 2 PRODUCTS

by the manufacturer.

PART 3 EXECUTION

3.01 INSTALLATION

C. Wiring Connectors for Terminations:

connectors

B. Insulation Voltage Rating: 600 V.

A. Conductor Stranding:

C. Insulation

2.04 WIRING CONNECTORS

- b. 208Y/120 V, 3 Phase, 4 Wire System:

- 1) Phase A: Black.

Where support and attachment component types and sizes are not indicated select in
accordance with manufacturer's application criteria as required for the load to be supported with
a minimum safety factor of 1.25. Include consideration for vibration, equipment operation, and
shock loads where applicable.
Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless
specifically indicated or permitted.

4. Steel Components: Use corrosion resistant materials suitable for the environment where installed a. Indoor Dry Locations: Use zinc-plated steel or approved equivalent unless otherwise

indicated b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel or stainless steel unless otherwise indicated.

B. Conduit and Cable Supports: Straps, clamps, etc. suitable for the conduit or cable to be supported Conduit Straps: One-hole or two-hole type; steel.

Conduit Clamps: Bolted type unless otherwise indicated. C. Outlet Box Supports: Hangers, brackets, etc. suitable for the boxes to be supported. D. Metal Channel (Strut) Framing Systems: Factory-fabricated continuous-slot metal channel (strut) and associated fittings, accessories, and hardware required for field-assembly of supports.

1. Channel Material: a. Indoor Dry Locations: Use galvanized steel. b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.

E. Hanger Rods: Threaded zinc-plated steel unless otherwise indicated.

F. Anchors and Fasteners: 1. Unless otherwise indicated and where not otherwise restricted, use the anchor and fastener types indicated for the specified applications.

Concrete: Use preset concrete inserts, expansion anchors, or screw anchors. Solid or Grout-Filled Masonry: Use expansion anchors or screw anchors. Hollow Masonry: Use toggle bolts.

Hollow Stud Walls: Use toggle bolts.

Steel: Use beam clamps, machine bolts, or welded threaded studs. Sheet Metal: Use sheet metal screws.

8. Wood: Use wood screws. 9. Plastic and lead anchors are not permitted. 10. Powder-actuated fasteners are not permitted

11. Hammer-driven anchors and fasteners are not permitted.

12. Preset Concrete Inserts: Continuous metal channel (strut) and spot inserts specifically designed to be cast in concrete ceilings, walls, and floors. 13. Post-Installed Concrete and Masonry Anchors: Evaluated and recognized by ICC Evaluation Service, LLC (ICC-ES) for compliance with applicable building code.

PART 3 EXECUTION 3.01 INSTALLATION

2.

A. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems. B. Equipment Support and Attachment:

1. Use metal fabricated supports or supports assembled from metal channel (strut) to support

equipment as required 2. Use metal channel (strut) secured to studs to support equipment surface-mounted on hollow stud walls when wall strength is not sufficient to resist pull-out. Use metal channel (strut) to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface

4. Unless otherwise indicated, mount floor-mounted equipment on properly sized 3 inch high concrete pad constructed in accordance with Section 033000. 5. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.

> END OF SECTION 260529 **SECTION 260533** CONDUIT

# 1.01 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate minimum sizes of conduits with actual type and quantity of conductors to be installed, including adjustments for conductor sizes increased for voltage drop.

> Coordinate arrangement of conduits with structural members, ductwork, piping, equipment, and other potential conflicts. Coordinate work to provide roof penetrations that preserve integrity of roofing system and do not void roof warranty.

#### PART 2 PRODUCTS 2.01 CONDUIT APPLICATIONS

PART 1 GENERAL

A. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit

B. Underground: Under Slab on Grade: Use galvanized steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), galvanized steel electrical metallic tubing (EMT), or rigid PVC

2. Exterior, Direct-Buried: Use galvanized steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), galvanized steel electrical metallic tubing (EMT), or rigid PVC conduit

3. Where rigid polyvinyl (PVC) conduit is provided, transition to galvanized steel rigid metal conduit below grade where emerging from underground. 4. Where rigid polyvinyl (PVC) conduit larger than 2 inch (53 mm) trade size is provided, use galvanized steel rigid metal conduit elbows or PVC-coated galvanized steel rigid metal conduit

elbows for bends. Where galvanized rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing (EMT) emerges from concrete into soil, use corrosion protection tape, factory-applied corrosion protection coating, or field-applied corrosion protection compound acceptable to authorities having jurisdiction to provide supplementary corrosion protection for minimum of 4 inches on either side of where conduit emerges.

C. Embedded Within Concrete: 1. Within Slab on Grade: Not permitted.

D. Concealed Within Masonry Walls: Use galvanized steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing (EMT) E. Concealed Within Hollow Stud Walls: Use galvanized steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing (EMT). F. Concealed Above Accessible Ceilings: Use galvanized steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing (EMT). G. Interior, Damp or Wet Locations: Use galvanized steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing (EMT). H. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), or galvanized steel electrical metallic tubing

I. Exposed, Exterior, Not Subject to Severe Physical Damage: Use galvanized steel rigid metal conduit (RMC) or galvanized steel intermediate metal conduit (IMC). J. Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit.

1. Maximum Length: 6 feet. K. Flexible Connections to Vibrating Equipment:

1. Dry Locations: Use flexible metal conduit (FMC). Damp, Wet, or Corrosive Locations: Use liquid-tight flexible metal conduit.

Maximum Length: 6 feet unless otherwise indicated.

L. Fished in Existing Walls, Where Necessary: Use flexible metal conduit (FMC), galvanized steel electrical metallic tubing (EMT), or stainless steel electrical metallic tubing (EMT) 2.02 CONDUIT - GENERAL REQUIREMENTS

A. Provide conduit, fittings, supports, and accessories required for complete raceway system.

B. Minimum Conduit Size, Unless Otherwise Indicated: Branch Circuits: 3/4-inch trade size.

Branch Circuit Homeruns: 3/4-inch trade size. Flexible Connections to Luminaires: 3/8-inch trade size.

4. Underground, Interior: 3/4-inch trade size.

5. Underground, Exterior: 1-inch trade size.

C. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified. 2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.

# 1. Material: Use steel.

B. Fittings:

B. Fittings:

B. Fittings:

B. Fittings:

 Do not use die cast zinc fittings. 2. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.04 GALVANIZED STEEL INTERMEDIATE METAL CONDUIT (IMC) A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.

Material: Use steel.

#### a. Do not use die cast zinc fittings. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set

screw and compression/gland types, are not permitted. 2.05 FLEXIBLE METAL CONDUIT (FMC) A. Description: NFPA 70, Type FMC standard-wall steel flexible metal conduit listed and labeled as

complying with UL 1, and listed for use in classified firestop systems. B. Fittings:

1. Material: Use steel. a. Do not use die cast zinc fittings.

# 2.06 LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LFMC)

A. Description: NFPA 70, Type LFMC polyvinyl chloride (PVC) jacketed steel flexible metal conduit listed and labeled as complying with UL 360.

#### 1. Material: Use steel. a. Do not use die cast zinc fittings.

2.07 GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT)

A. Description: NFPA 70, Type EMT galvanized steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797

#### Material: Use steel. a. Do not use die cast zinc fittings.

2. Connectors and Couplings: Use compression/gland or set-screw type.

a. Do not use indenter type connectors and couplings. 3. Damp or Wet Locations, Where Permitted: Use fittings listed for use in wet locations.

2.08 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and

listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C. B. Fittings:

1. Manufacturer: Same as manufacturer of conduit to be connected.

2.09 ACCESSORIES A. Corrosion Protection Tape: PVC-based, minimum thickness of 20 mil, 0.020 inch.

- B. Conduit Joint Compound: Corrosion-resistant, electrically conductive compound listed as complying with UL 2419; suitable for use with conduit to be installed.
- C. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.
- D. Pull Strings: Use nylon or polyester tape with average breaking strength of not less than 1,250 lbf. E. Sealing Systems for Concrete Penetrations: Sleeves: Provide water stop ring or cement coating that bonds to concrete to prevent water
- 2. Rate for minimum of 40 psig; suitable for sealing around conduits to be installed.
- F. Sealing Systems for Roof Penetrations: Premanufactured components and accessories as required to preserve integrity of roofing system and maintain roof warranty; suitable for conduits and roofing system to be installed; designed to accommodate existing penetrations where applicable.

G. Firestop Sleeves: Listed; provide as required to preserve fire resistance rating of building elements. PART 3 EXECUTION

3.01 INSTALLATION

- A. Conduit Routing: Unless dimensioned, conduit routing indicated is diagrammatic.
- Conceal conduits unless specifically indicated to be exposed. 3. Conduits in the following areas may be exposed, unless otherwise indicated: a. Electrical rooms.
- b. Mechanical equipment rooms.
- Within joists in areas with no ceiling. 4. Unless otherwise approved, do not route exposed conduits:
- a. Across floors. b. Across roofs.
- c. Across top of parapet walls. Across building exterior surfaces.
- Maintain minimum clearance of 12 inches between conduits and hot surfaces. This includes, but not limited to:
- a. Heaters b. Hot Water Piping
- c. Flues
- 6. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
- B. Conduit Support: 1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 260529. Provide independent support from building structure. Do not provide support from piping,
- ductwork, or other systems Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do
- not provide support from ceiling grid or allow conduits to lay on ceiling tiles. 4. Use conduit strap to support single surface-mounted conduit. a. Use clamp back spacer with conduit strap for damp and wet locations to provide space
- between conduit and mounting surface. 5. Use metal channel/strut with accessory conduit clamps to support multiple parallel surfacemounted conduits
- Use conduit clamp to support single conduit from beam clamp or threaded rod.
- 7. Use trapeze hangers assembled from threaded rods and metal channel/strut with accessory conduit clamps to support multiple parallel suspended conduits. 8. Use of spring steel conduit clips for support of conduits is permitted only as follows: a. Support of electrical metallic tubing (EMT) up to 1-inch (27 mm) trade size concealed
- above accessible ceilings and within hollow stud walls. b. Spring clips shall not be used to support conduits to ceiling support wires..
- C. Connections and Terminations: Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel
- conduits prior to making connections. 2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
- D. Penetrations: Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer
- Provide suitable sealing system where conduits penetrate exterior wall below grade. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
- Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.
- Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 078400 E. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and
- expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to: 1. Where conduits cross structural joints intended for expansion, contraction, or deflection. Where calculated in accordance with NFPA 70 for rigid polyvinyl chloride (PVC) conduit installed above ground to compensate for thermal expansion and contraction.
- Where conduits are subject to earth movement by settlement or frost. F. Conduit Sealing: 1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not
- limited to: Where conduits cross barriers between areas of potential substantial temperature differential, use foam conduit sealant at accessible point near penetration to prevent condensation. This includes, but is not limited to:
- a. Where conduits pass from outdoors into conditioned interior spaces. b. Where conduits pass from unconditioned interior spaces into conditioned interior spaces. G. Provide pull string in each empty conduit and in conduits where conductors and cables are to be
- installed by others. Leave minimum slack of 12 inches at each end. H. Install no more than equivalent of four 90 degree bends between boxes. Use conduit bodies to
- make sharp changes in direction, as around beams. Use hydraulic one shot bender to fabricate bends in metal conduit larger than 1 1/4 inch size.
- 3.02 PROTECTION A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

and to accommodate devices and equipment to be installed

conduit or exposed intermediate metal conduit (IMC) is used.

Use suitable concrete type boxes where flush-mounted in concrete.

Use shallow boxes where required by the type of wall construction.

connected gangable boxes unless specifically indicated or permitted.

NEMA 250 Environment Type, Unless Otherwise Indicated:

a. Indoor Clean, Dry Locations: Type 1, painted steel.

b. Outdoor Locations: Type 3R, painted steel.

3. Junction and Pull Boxes Larger Than 100 cubic inches:

Use suitable masonry type boxes where flush-mounted in masonry walls.

Do not use "through-wall" boxes designed for access from both sides of wall.

a. Wiring Devices: 4 inch square by 2-1/8 inch deep (100 by 54 mm) trade size.

a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.

A. Unless otherwise indicated, provide separate boxes for line voltage and low voltage systems.

Locate boxes as required for devices installed under other sections or by others.

B. Flush-mount boxes in finished areas unless specifically indicated to be surface-mounted.

Unless dimensioned, box locations indicated are approximate.

Locate boxes so that wall plates do not cross masonry joints.

inches horizontal separation unless otherwise indicated.

Locate boxes so that wall plates do not span different building finishes.

different mounting heights, install along a common vertical center line.

C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches:

minimum size requirements specified.

11. Minimum Box Size, Unless Otherwise Indicated:

PART 1 GENERAL - NOT USED

A. General Requirements

required

PART 3 EXECUTION

3.01 INSTALLATION

where required

directed by the Owner.

D. Box Locations:

PART 2 PRODUCTS

2.01 BOXES

END OF SECTION 260533

**SECTION 260535** 

BOXES

Use sheet-steel boxes for dry locations unless otherwise indicated or required.

indicated or required; furnish with compatible weatherproof gasketed covers.

3. Use cast iron boxes or cast aluminum boxes where exposed galvanized steel rigid metal

Provide all boxes, fittings, supports, and accessories required for a complete raceway system Where box size is not indicated, size to comply with NFPA 70 but not less than applicable Provide grounding terminals within boxes where equipment grounding conductors terminate.

B. Outlet and Device Boxes Up to 100 cubic inches, Including Those Used as Junction and Pull Boxes: 2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise

6. Use raised covers suitable for the type of wall construction and device configuration where

Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire 10. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-

b. Ceiling Outlets: 4 inch octagonal or square by 2-1/8 inch deep (100 by 54 mm) trade size. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.

C. Where installed in Inmate areas, boxes shall be installed per the Owner's requirements. Do not locate where accessible to Inmates. Provide tamper-proof screws to close covers as required and

Unless otherwise indicated, where multiple outlet boxes are installed at the same location at Do not install flush-mounted boxes on opposite sides of walls back-to-back. Provide minimum 6



<ol> <li>Acoustic-Rated Walls: Do not install flush-mounted boxes on opposite sides of walls back-to- back: provide minimum 24 inches horizontal separation.</li> </ol>	IOTA Engineering: www.iotaengineering.com     IVS: www.lyscontrols.com
<ol> <li>Fire Resistance Rated Walls: Install flush-mounted boxes such that the required fire resistance</li> <li>will not be reduced</li> </ol>	5. Myers Power Products: www.myerseps.com 6. Same manufacturer of lighting control system
<ul> <li>a. Do not install flush-mounted boxes on opposite sides of walls back-to-back; provide</li> <li>minimum 24 inches separation where wall is constructed with individual poncommunicating</li> </ul>	B. All Relays:
stud cavities or protect both boxes with listed putty pads.	<ol> <li>Products shall be capable of switching 20 amp loads under normal power conditions at 120-277V.</li> </ol>
total aggregate area of openings exceeds 100 square inches for any 100 square feet of	2. Provide with universal rated voltage inputs for normal power sense, normal switched power, and emergency power at 120-277V.
<ul> <li>9. Locate junction and pull boxes as indicated, as required to facilitate installation of conductors,</li> </ul>	3. Provide with integral momentary test switch to test a normal power loss condition. Releasing the switch shall return the device into normal operation.
Section 260533.	<ol> <li>LED indicators indicating normal or emergency operation mode of the device.</li> <li>Where dimming is required, provide products compatible with dimming protocols being</li> </ol>
<ul> <li>E. Box Supports:</li> <li>1. Secure and support boxes in accordance with NFPA 70 and Section 260529 using suitable</li> </ul>	provided. 6 Provide with auxiliary input for connection to remote systems, where indicated, to force
supports and methods approved by the authority having jurisdiction.	emergency indicated luminaires to full brightness. Remote systems, where indicated, shall provide a normally closed and maintained dry contact
F. Install boxes plumb and level. G. Flush-Mounted Boxes:	C. Automatic Load Control Relay (ALCR)
<ol> <li>Install boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that front edge of box or associated raised cover is not set back from finished surface more than 1/4</li> </ol>	<ol> <li>UL924 listed device.</li> <li>Operation:</li> </ol>
inch or does not project beyond finished surface.	a. Allows emergency light fixtures to be controlled with non-emergency light fixtures when
<ul> <li>Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.</li> </ul>	<ul> <li>b. Upon loss of normal power the device shall bypass lighting controls and shunt dimmed inputs (when present) to force amorgonay light firtures to full brightness.</li> </ul>
I. Install firestopping to preserve fire resistance rating of partitions and other elements.	D. Branch Circuit Emergency Lighting Transfer Switch (BCELTS)
<ul> <li>J. Close unused box openings.</li> <li>K. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed</li> </ul>	<ol> <li>UL1008 listed device:</li> <li>Operation:</li> </ol>
or designated for future use.	a. Allows emergency light fixtures to be controlled with non-emergency light fixtures when
L. Secure flush mounting box to interior wall and partition studs with external to box fasteners. Accurately position to allow for surface finish thickness.	<ul> <li>b. Upon loss of normal power the device transfers power from normal to emergency for</li> </ul>
END OF SECTION 260535	light fixtures to full brightness.
SECTION 260553 IDENTIFICATION	2.05 CABLING
PART 1 GENERAL - NOT USED	2.06 LOW-VOLTAGE SWITCHES
2.01 IDENTIFICATION REQUIREMENTS	A. Provide switches and associated wiring and/or cabling compatible with system being provided.
A. Identification for Equipment:	<ul> <li>B. Engraved labeling:</li> <li>1. Low-voltage switches shall have each button labeled with associated function, such as "ON"</li> </ul>
equipment and associated sections, compartments, and components.	and "OFF <sup>"</sup> . Dimming, where indicated, shall be identified at each button with associated function, such as "RAISE", "LOWER", raise/lower symbol, or similar.
<ul> <li>a. Enclosed switches, circuit breakers, and motor controllers:</li> <li>1) Identify power source and circuit number. Include location when not within sight of</li> </ul>	<ol> <li>Labeling of buttons shall be provided by factory engraving. Provide engraving with a color th is in contrast to the device color for legibility and visual identification. Adhesive labels are not</li> </ol>
equipment. 2. Use voltage marker to identify highest voltage present for each piece of electrical equipment.	permitted.
3. Use identification label or handwritten text using indelible marker on inside of door at each fused switch to identify required NEMA fuse class and size	with an identification label indicating load controlled in addition to a visual light indicator that
<ol> <li>Use identification label if a name late hard within text using indebilible marker on inside of door at each mater controller to identify name late horsen over full load amore a code latter control for the former of the load amore and latter control for the second latter and the second latter control of the second latter and the second latter and the second latter control of the second latter and the se</li></ol>	PART 3 EXECUTION
voltage, and phase of motor(s) controlled.	3.01 INSTALLATION
5. Available Fault Current Documentation: Use identification label to identify the available fault current and date calculations were performed at locations requiring documentation byNFPA 70.	A. Coordinate locations of outlet boxes provided under Section 260535 as required for installation of lighting control devices provided under this section.
<ul> <li>B. Identification for Devices:</li> <li>1 Use identification label to identify fire alarm system devices</li> </ul>	<ol> <li>Mounting Heights: Unless otherwise indicated, as follows:</li> <li>Wall Switch Motion Sensors: 46 Inches above finished floor</li> </ol>
<ol> <li>Use identification label or engraved wallplate to identify serving branch circuit for all</li> </ol>	b. Low-Voltage Switches: 46 Inches above finished floor.
a. For receptacles in public areas or in areas directed by the Design Team, provide	<ul> <li>B. Install lighting control devices plumb and level, and held securely in place.</li> <li>3.02 SYSTEM STARTUP AND PROGRAMMING</li> </ul>
Identification on inside surface of wallplate.	A. Provide factory startup and programming of the system. Program according to Owner's
A. Identification Nameplates:	requirements.
<ol> <li>Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/16 inch; engraved text.</li> </ol>	A. The contractor shall provide Functional Testing after system startup and programming by a
<ol> <li>Stainless Steel Nameplates: Minimum thickness of 1/32 inch; engraved or laser-etched text.</li> <li>Aluminum Nameplates: Anodized; minimum thickness of 1/32 inch; engraved or laser-etched</li> </ol>	manufacturer's authorized technician, calibrated to perform per the construction documents, and prior to the engineer's final verification and punch lists.
text.	3.04 CLOSEOUT ACTIVITIES
1. Minimum Size: 1 inch by 2.5 inches.	A. Training: Prior to substantial completion, train Owner's personnel on operation, adjustment, programming, and maintenance of fully operational lighting control devices Provide a minimum of
<ol> <li>I ext: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height:</li> </ol>	two hours of training. END OF SECTION 260923
a. Equipment Designation: 1/2 inch. b. Other Information: 1/4 inch.	SECTION 262726
<ol> <li>Color:</li> <li>a. Normal Power System: White text on black background.</li> </ol>	WIRING DEVICES PART 1 GENERAL - NOT USED
<ul> <li>b. Emergency Power System: White text on red background.</li> <li>Eiro Alerm System: White text on red background.</li> </ul>	PART 2 PRODUCTS
	2.01 WIRING DEVICE APPLICATIONS
C. Format for Receptacle Identification:	A Describe OFI meets stick for all respects also installed within Ofest of sinks and other leastings as
<ul> <li>C. Format for Receptacle Identification:</li> <li>1. Minimum Size: 3/8 inch by 1.5 inches.</li> <li>2. Legend: Power source and circuit number or other designation indicated.</li> </ul>	A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.
<ul> <li>C. Format for Receptacle Identification:</li> <li>1. Minimum Size: 3/8 inch by 1.5 inches.</li> <li>2. Legend: Power source and circuit number or other designation indicated.</li> <li>3. Text: All capitalized unless otherwise indicated.</li> <li>4. Minimum Text Height: 3/16 inch</li> </ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide CFCI protection for receptacles conving electric drinking fountains.</li> </ul>
<ul> <li>C. Format for Receptacle Identification:</li> <li>1. Minimum Size: 3/8 inch by 1.5 inches.</li> <li>2. Legend: Power source and circuit number or other designation indicated.</li> <li>3. Text: All capitalized unless otherwise indicated.</li> <li>4. Minimum Text Height: 3/16 inch.</li> <li>5. Color: Black text on clear background.</li> </ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES</li> </ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION 3.01 INSTALLATION</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES <ul> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> </ul> </li> </ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION <ol> <li>INSTALLATION</li> <li>Install identification products to be plainly visible for examination, adjustment, servicing, and</li> </ol> </li> </ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES <ul> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover</li> </ul> </li> </ul>
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<ul> <li>C. Format for Receptacle Identification:         <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> </ol> </li> <li>END OF SECTION 260553         <ol> <li>SECTION 260583             </li> <li>WIRING CONNECTIONS</li> </ol> </li> </ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>2.03 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> </ul>
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C. Format for Receptacle Identification: 1. Minimum Size: 3/8 inch by 1.5 inches. 2. Legend: Power source and circuit number or other designation indicated. 3. Text: All capitalized unless otherwise indicated. 4. Minimum Text Height: 3/16 inch. 5. Color: Black text on clear background. PART 3 EXECUTION 3.01 INSTALLATION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. 1. Devices: Outside face of cover. END OF SECTION 260553 SECTION 260583 WIRING CONNECTIONS PART 1 GENERAL - NOT USED PART 2 PRODUCTS - NOT USED PART 3 EXECUTION	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES <ul> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> </ul> </li> <li>2.03 WALL SWITCHES <ul> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> </ul> </li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> </ul> <li>2.04 WALL DIMMERS</li>
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<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION 3.01 INSTALLATION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. 1. Devices: Outside face of cover. END OF SECTION 260553 SECTION 260553 SECTION 260583 WIRING CONNECTIONS PART 1 GENERAL - NOT USED PART 2 PRODUCTS - NOT USED PART 3 EXECUTION 3.01 ELECTRICAL CONNECTIONS A. Make electrical connections in accordance with equipment manufacturer's instructions. B. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered. D. Provide receptacle outlet to accommodate connection with attachment plug.</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES <ul> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> </ul> </li> <li>2.03 WALL SWITCHES <ul> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single pole single throw, double pole single pole single throw, three way, or four way as indicated on the drawings.</li> </ul> </li> <li>2.04 WALL DIMMERS <ul> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followi square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:</li> <li>A. To main the drawings.</li> </ul> </li> </ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION 3.01 INSTALLATION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. 1. Devices: Outside face of cover. END OF SECTION 260553 SECTION 260553 SECTION 260583 WIRING CONNECTIONS PART 1 GENERAL - NOT USED PART 3 EXECUTION 3.01 ELECTRICAL CONNECTIONS A. Make electrical connections in accordance with equipment manufacturer's instructions. B. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered. D. Provide receptacle outlet to accommodate connection with attachment plug. E. Provide cord and cap where field-supplied attachment plug is required. F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES <ul> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> </ul> </li> <li>2.03 WALL SWITCHES <ul> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> </ul> </li> <li>2.04 WALL DIMMERS <ul> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followi square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unle</li></ul></li></ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION 3.01 INSTALLATION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. 1. Devices: Outside face of cover. END OF SECTION 260553 SECTION 260583 WIRING CONNECTIONS PART 1 GENERAL - NOT USED PART 2 PRODUCTS - NOT USED PART 3 EXECUTION 3.01 ELECTRICAL CONNECTIONS A. Make electrical connections in accordance with equipment manufacturer's instructions. B. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. D. Provide receptacle outlet to accommodate connection with attachment plug. E. Provide cord and cap where field-supplied attachment plug is required. F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followi square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Silde control type with separate on/off switch.</li> <li>C. Power</li></ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION 3.01 INSTALLATION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. 1. Devices: Outside face of cover. END OF SECTION 260553 SECTION 260583 WIRING CONNECTIONS PART 1 GENERAL - NOT USED PART 2 PRODUCTS - NOT USED PART 3 EXECUTION 3.01 ELECTRICAL CONNECTIONS A. Make electrical connections in accordance with equipment manufacturer's instructions. B. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wel locations. C. Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wel locations. C. Connect heat producing equipment using fixible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wel locations. C. Connect heat producing equipment using fixible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wel locations. C. Connect heat producing equipment using fixible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wel locations. C. Provide cord and cap where field-supplied attachment plug is required. F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes. G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wring requirements.</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRNG DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, double pole single throw, double pole single throw, double pole single pole single throw, double pole single pole single throw, double pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followi square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Silde control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ul> <li>LED Lighti</li></ul></li></ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION <ul> <li>a. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> </ul> </li> <li>PART 1 GENERAL - NOT USED <ul> <li>PART 2 EXECUTION</li> <li>Soft I GENERAL - NOT USED</li> <li>PART 3 EXECUTION</li> </ul> </li> <li>Soft I GENERAL - NOT USED <ul> <li>PART 3 EXECUTION</li> <li>Soft I GENERAL - NOT USED</li> <li>PART 3 EXECUTION</li> <li>Soft I GENERAL - NOT USED</li> <li>PART 3 EXECUTION</li> <li>Soft I GENERAL - NOT USED</li> <li>PART 3 EXECUTION</li> <li>A. Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations.</li> <li>Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.</li> <li>Provide receptacle outlet to accommodate connection with attachment plug.</li> <li>Provide cord and cap where field-supplied attachment plug is required.</li> <li>F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.</li> <li>G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.</li> <li>H. Install terminal block jumpers to complete equipment wiring requirements.</li> </ul></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES <ul> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> </ul> </li> <li>2.03 WALL SWITCHES <ul> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; limuninated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> </ul> </li> <li>2.04 WALL DIMMERS <ul> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with MAM D 1 and NEMA WD 6, and listed as complying with L1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ul> <li>LED Lighting</li> </ul> </li> <li>2.05 RECEPTACLES</li> <li>A. Convenience Receptacles:</li> <li>Industrial specification grade, 20A, 125V, NEMA 5-20F single or duple</li></ul></li></ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION <ul> <li>3.01 INSTALLATION</li> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> </ul> </li> <li>PART 1 GENERAL - NOT USED <ul> <li>PART 2 RECUTION</li> </ul> </li> <li>3.01 ELECTRICAL CONNECTIONS</li> </ul> <li>PART 3 EXECUTION <ul> <li>3.01 ELECTRICAL CONNECTIONS</li> </ul> </li> <li>A. Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>B. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wel locations.</li> <li>C. Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wel locations.</li> <li>C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.</li> <li>D. Provide receptacle outlet to accommodate connection with attachment plug.</li> <li>E. Provide cord and cap where field-supplied attachment plug is required.</li> <li>F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment wiring requirements.</li> <li>H. Install terminal block jumpers to complete equipment wiring requirements.</li>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES <ul> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> </ul> </li> <li>2.03 WALL SWITCHES <ul> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> </ul> </li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> </ul> <li>2.04 WALL DIMMERS <ul> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the</li></ul></li>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION 3.01 INSTALLATION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. 1. Devices: Outside face of cover. END OF SECTION 260553 SECTION 260553 SECTION 260563 WIRING CONNECTIONS PART 1 GENERAL - NOT USED PART 2 PRODUCTS - NOT USED PART 3 EXECUTION 3.01 ELECTRICAL CONNECTIONS A. Make electrical connections in accordance with equipment manufacturer's instructions. B. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered. Provide cord and cap where field-supplied attachment plug is required. F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment writing requirements. H. Install internonceting conduit and wiring between devices and equipment writing requirements. I. Install internonceting conduit and wiring between devices and equipment writing requirements. J. Coolers and Frezers: Cut and seal conduit openings in frezer and cooler walls, floor, and ceilings.</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> <li>2.03 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followi square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings: <ol> <li>Standard Convenience</li></ol></li></ul>
<ul> <li>C. Format for Receptacle identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION 3.01 INSTALLATION <ul> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. <ul> <li>Devices: Outside face of cover.</li> </ul> END OF SECTION 260553 SECTION 260553 SECTION 260563 WIRING CONNECTIONS A. Make electrical connections in accordance with equipment manufacturer's instructions. B. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered. Provide cord and cap where field-supplied attachment plug is required. F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment wiring requirements. I. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements. I. Install block jumpers to complete equipment wiring requirements. J. Install block jumpers to complete equipment wiring requirements. J. Install block jumpers to complete equipment is for a cooler walls, floor, and ceilings. END OF SECTION 260583 SECTION</li></ul></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> <li>2.03 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings: <ol> <li>LED Lighting</li> &lt;</ol></li></ul>
<ul> <li>C. Format for Receptacle Identification:         <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legent: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>INSTALLATION</li> <li>A Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> <li>END OF SECTION 260553</li></ol></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES         <ul> <li>A. Wiring Devices Installed in Finished Spaces: Gray with galvanized steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> </ul> </li> <li>2.03 WALL SWITCHES         <ul> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, three way, or four way as indicated on the drawings.</li> </ul> </li> <li>2.04 WALL DIMMERS         <ul> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accussible without removing wall plate, complying with NEMA WD 1 and NEMA WD 4, and 1000000000000000000000000000000000000</li></ul></li></ul>
<ul> <li>C. Format for Receptacle Identification:         <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legent: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> </ol> </li> <li>PART 1 GENERAL - NOT USED         PART 1 GENERAL - NOT USED         PART 2 PRODUCTS - NOT USED         PART 3 EXECUTION         </li> <li>A Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations.</li> <li>Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations.</li> <li>Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.</li> <li>Provide cord and cap where field-supplied attachment plug is required.</li> <li>Install disconnect switches, control explained attachment plug is required.</li> <li>Install disconnect switches, controlers, control stations, and control devices and equipment wiring requirements.</li> <li>Install disconnect switches, controlers, control stations, and control devices to complete equipment wiring requirements.</li> <li>Install interconnecting cond</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES         <ul> <li>A. Wiring Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> </ul> </li> <li>2.03 WALL SWITCHES         <ul> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; isingle pole single throw, there way, or four way as indicated on the drawings.</li> </ul> </li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; isingle pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>C.9 WALL DIMMERS         <ul> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 4, and 0 he drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on th</li></ul></li></ul>
<ul> <li>C. Format for Receptacle Identification:         <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legent: Power source and circuit number or other designation indicated.</li> <li>Text. All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> </ol> </li> <li>END OF SECTION 260553         <ol> <li>SECTION 260583</li> <li>WIRING CONNECTIONS</li> </ol> </li> <li>PART 1 GENERAL - NOT USED         <ol> <li>PART 3 EXECUTION</li> </ol> </li> <li>Soft Electrono Sin accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations.</li> <li>Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.</li> <li>Provide receptacle outlet to accommodate connection with attachment plug.</li> <li>Provide cord and cap where field-supplied attachment plug is required.</li> <li>Install disconnect switches, controllers, control stations, and control devices to complete equipment connection boxes.</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRNO DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>2.03 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; limininated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followi square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ul> <li>LED Lighting</li> </ul> </li> <li>2.05 RECEFYTACLES</li> <ul> <li>A. Convenience Rec</li></ul></ul>
<ul> <li>C. Format for Receptacle identification:         <ol> <li>Minimum Size: 39 inch by 1.5 inches.</li> <li>Legent: Power source and circuit number or other designation indicated.</li> <li>Text. All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3146 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> </ol> </li> <li>END OF SECTION 260553         SECTION 260583 WIRING CONNECTIONS     </li> <li>PART 1 GENERAL - NOT USED         PART 1 GENERAL - NOT USED     </li> <li>PART 3 EXECUTION         <ol> <li>A. Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections to equipment using fiexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations.</li> <li>Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.</li> <li>Provide receptacle outlet to accommodate connections at outlet boxes and equipment connection boxes.</li> <li>Install disconnect switches, controllers, control stations, and control devices to complet</li></ol></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>204 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followi square law dimming curve, integral radio frequency interference filtering, power failure presest memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 1 and NEMA WD 1 and the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ul> <li>LED Lighting</li> </ul> </li> <li>A. Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F single or duplex as indicated on the drawings.</li> <li>Weathther Resi</li></ul>
<ul> <li>C. Format for Receptacle Identification:         <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>Statilized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.                 <ul></ul></li></ol></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRNO DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Vall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; lilluminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followi square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ul> <li>LED Lighting</li> </ul> </li> <li>208 RECEPTACLES</li> <li>A. Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, sigle or duplex as indicated on the drawings.</li> <li>We</li></ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legent: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION 3.01 INSTALLATION  <ul> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> <li>END OF SECTION 260553         SECTION 260553             SECTION 260553             SECTION 260563             WIRING CONNECTIONS </li> </ul> PART 1 GENERAL - NOT USED  PART 2 PRODUCTS - NOT USED  PART 3 EXECUTION  3.01 ELECTRICAL CONNECTIONS  A. Make electrical connections in accordance with equipment manufacturer's instructions. B. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered. D. Provide receptacle outlet to accommodate connections at outlet boxes and equipment connections to equipment using fixible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using fixible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations. C. Connect heat producing equipment using fixible conduit. Use liquid-tight flexible conduit with watertight connectors to acommodate connection with attachment plug. F. Provide cord and cap where field-supplied attachment plug is required. I. Install suitable strain-relief clamps and fittings for cord connections a outlet boxes and equipment wiring requirements. H. Install disconnect soutlet period statoms, and control d</li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in linished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>C. Wiring Devices Installed in Vet or Damp Locations: Gray with specified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts, illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integrai radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 2 is and NEMA WD 1.</li> <li>Dewer Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings.</li> <li>I. LED Lighting</li> <li>2.05 RECEPTACLES</li> <li>A. Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, single or duplex as indicated on the drawings.</li> <li>Tamper Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEM 5-20R, listed and</li></ul>
<ul> <li>C. Format for Receptacle Identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legent: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION <ol> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and mintenance.</li> <li>Devices: Outside face of cover.</li> </ol> </li> <li>END OF SECTION 260553 <ul> <li>SECTION 260553</li> <li>WIRING CONNECTIONS</li> </ul> </li> <li>PART 3 EXECUTION <ul> <li>BART 4 GENERAL - NOT USED</li> <li>PART 2 PRODUCTS - NOT USED</li> </ul> </li> <li>PART 3 EXECUTION <ul> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations.</li> <li>Connect heat producing equipment using flexible conducts at utile to score and equipment connections at outlet boxes and equipment connection backs.</li> <li>Install suble strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection sets.</li> <li>END OF SECTION 260533</li> <li>Light Tile Control SECTION 260543</li> <li>SECTION 260553</li> <li>SECTION 260553</li> <li>Light Tile Control</li></ul></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>2.03 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on is single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 5. and listed as complying with UL 1472; types and ratings suitable for load control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with NEMA WD 1 and NEMA WD 5. and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>Control: Silde control type with separate on/off switch.</li> <li>Convenience Receptacles: Industrial specification grade, 20A,</li></ul>
<ul> <li>C. Format for Receptacle Identification:         <ol> <li>Minimum Size: 38 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 316 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>All minimum Text Height: 316 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION         <ol> <li>Install identification products to be plainly visible for examination, adjustment, servicing, and minimenance.</li> <li>Devices: Outside face of cover.                 <ul></ul></li></ol></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRING DEVICE FINISHES</li> <li>A. Wining Devices Installed in Infinished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wining Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>C. Wining Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single ple single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with real illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on, single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>204 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without the moving wall plate, complying with UL 14MD to and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F single or duplex as indicated on the drawings.</li> <li>Weather Resistant Convenience Receptacles: Industrial specification grade,</li></ul>
<ul> <li>C. Format for Receptacle Identification:         <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text. All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION</li> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> <li>END OF SECTION 260553             <ul> <li>SECTION 260563</li> <li>SECTION 260583</li> <li>SECTION 260593</li> <li>SECTION 260593</li> <li>SECTION 260593</li> <li>AMake electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Make electrical connections to equipment using flexible conduit. Use liquid-tight flexible conduit with wateright connectors in damp or well locations.</li> <li>Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with wateright connectors in damp or well loca</li></ul></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>204 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with UEMA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Slide control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-207 single or duplex as indicated as weather resistant type complying with UL 498 Supplement SE sultable for installation in damp or wet locations; single o</li></ul>
<ul> <li>C. Format for Receptable identification:         <ul> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ul> </li> <li>PART 3 EXECUTION</li> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>1. Devices: Outside face of cover.</li> </ul> <li>END OF SECTION 260583         <ul> <li>SECTION 260583</li> <li>SECTION 260583</li> <li>SECTION 260583</li> <li>SECTION 260583</li> <li>VIRING CONNECTIONS</li> </ul> </li> <li>A. Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>B. Make conduit connections to equipment using flexible conduit. Use liquid-light flexible conduit with wateright connectors in damp or wet locations.</li> <li>D. Provide receptacle outlet to accommodate connection with attachment plug.</li> <li>E. Provide cord and cap where field-supplied attachment plug is required.</li> <li>F. Install identification controllers, control stations, and control devices and equipment wring requirements.</li> <li>Install inforonnecting conduit and wring berning or sector and capital wring requirements.</li> <li>Install information.</li> <li>Coolers and Freezers: Cut and seal conduit genemet wring requirements.</li> <li>Install information.</li> <li>Devide cord source of source or specified supplied attachment plug is required.</li> <li>Install information conduit and wring between devices and equipment to complete equipment wring requirements.</li> <li>Install informatis conduit and wring between devices and equipments.</li>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>C.20 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pitot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; single pole single throw, three way, or four way as indicated on the drawings.</li> <li>Pitot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, three way, or four way as indicated on the drawings.</li> <li>Pitot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch accuesible without removing wall plate, complying with NEMA WD 1 and NE(AWD 6) and listed as complying with UL 1472; types and ratings suitable for load ontrolled indicated on the drawings.</li> <li>Control: Side control type with separate on/off switch.</li> <li>Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ul> <li>LED Lighting</li> </ul> </li> <li>Control: Side control type with separate on/off switch.</li> <li>Power Rating, Unle</li></ul>
<ul> <li>C. Format for Receptade Identification:         <ul> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Proves source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ul> </li> <li>PART 3 EXECUTION         <ul> <li>A install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> </ul> </li> <li>PART 1 GENERAL - NOT USED         <ul> <li>PART 2 FRODUCTS</li> <li>A Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Bake conduit connections in accordance with equipment manufacturer's instructions.</li> <li>B Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>B Make conduit connections in accordance with equipment tasing flexible conduit with waterlight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with waterlight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with waterlight connections in accordance with equipment task and the concentent producing equipment using flexible conduit. Use liquid-tight flexible conduit with waterlight connections and prove the total connections and titings for cord connections at outlet boxes and equipment connection boxes.</li> <li>Concent het producing equipment using flexible conduit using wire and cable with insulation suitable for temperatures encountered.</li> <li>Provide receptacle outlet to accommodate connection with attachment plug.</li> <li>Provide receptacle outlet to accommodate connections at outlet boxes and equipment connection boxes.</li></ul></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>C.20 WIRING DEVICE FINISHES</li> <li>A. Wring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wring Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>C. Wring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> <li>2.03 WALL SWTCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, three way, or four way as indicated on the drawings.</li> <li>Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, three way, or four way as indicated on the drawings.</li> <li>Pilot Light Wall Switches: Industrial specification grade, 20A, 120/277 V with red illuminated with load on; single pole single throw, three way, or four ways as indicated on the drawings.</li> <li>Control: Silde control type with separate on/off switch.</li> <li>Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ol> <li>LED Light Wall Switches: Industrial specification grade, 20A, 125V, NEM 5-20F, single or duplex as indicated on the drawings.</li> <li>Control: Side control type with separate on/off switch.</li></ol></li></ul>
<ul> <li>C. Format for Receptacle identification: <ol> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legenci: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ol> </li> <li>PART 3 EXECUTION <ol> <li>A install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> </ol> </li> <li>PART 1 GENERAL - NOT USED PART 2 FOOLOTS NOT USED PART 2 FOOLOTS NOT USED PART 3 EXECUTION A Make electrical connections in accordance with equipment manufacturer's instructions. B. Make electrical connections in accordance with equipment manufacturer's instructions. C. Connect has producing equipment using flexible conduit. Use liquid-tight flexible conduit with waterlight connections to equipment using flexible conduit. Use liquid-tight flexible conduit with waterlight connections to equipment using flexible conduit on temperatures encountered. D. Provide receptacle outlet to accommodate connection with attachment plug. Provide receptacle outlet to accommodate connections at outlet boxes and equipment wing requirements. I. Install suitable strain-relied clamps and fittings for cord connections at outlet boxes and equipment wing requirements. I. Install terminal book jumpers to complete equipment twing requirements. I. Install terminal book jumpers to complete equipment wing frequirements. I. Install environ Distributed, low voitage, digital, load control lers that control lighting indicated on the drawings. Link load controllers as part of a networked lighting control system where indicated on the drawings. Link load controllers as part of a networked lighting control system where indicated on the drawings. Link load controllers as part of a networked lighting control system where indicated o</li></ul>	<ul> <li>A. Provide GFI protection for ral receptacles installed within 5 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRING DEVICE FINISHES</li> <li>A. Wring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wing Devices Installed in Unfinished Spaces: Gray with spacified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>P. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with load on; single pole single throw, duoble pole single throw, three way, or four way as indicated on the drawings.</li> <li>C. Other Side Control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings;</li> <li>L. ED Lighting</li> <li>205 RECEPTACLES</li> <li>A. Convenience Receptacles: Industrial specification grade, 20A, 125V, NEM 5-20F single or duplex as indicated on the drawings.</li> <li>Weather Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEM 5-20R, listed and labeled as sweather resistant type complying with UL 498 Supplement SE suitable for installati</li></ul>
<ul> <li>C. Format for Receptacle identification:</li> <li>Minimum Size: 3/8 finch by 1.5 inches.</li> <li>Legendt: Proves source and cruciant number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/8 finch.</li> <li>Color: Block text on clear background.</li> </ul> PART 3 EXECUTION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. <ul> <li>Devices: Outside face of cover.</li> </ul> END OF SECTION 260533 SECTION 26053 SECTION 26053 SECTION 260533 SECTION 260533 SECTION 260533 SECTION 260533 SECTION 260533 SECTION 260533 SECTION 26053 SECTION 26053 SECTION 26053 SECTION 26053 SECTION 26053 SECTION 26053 SECTION 26054 A date conduit connections in accordance with equipment manufacturer's instructions. B. Make conduit connections in damp or wet locations. C. Cornect heat producing equipment using thread cable with insulation suitable for temperatures encountered. D. Provide receptacle outlet to accommodate connection with attachment plug. E. Provide cord and cap where field-supplied attachment plug is required. F. Install disconnect switches, control stations, and control devices to complete equipment wiring requirements. I. Install termination bock jumpers to complete equipment wiring requirements. E. Install disconnect switches, controlisting on freezer and cooler	<ul> <li>A. Provide GFI protection for all receptacles installed within 8 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRNO DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherprof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; illuminated with foad on, single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>204 WALL DIMMERSI</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control following square law dimming curve, integral radio frequency integrence filtering, power failure preset memory, air gap switch accessible without removing wall plate. Complying with VEM VI 1 407 NI 1 400 NI 1 400</li></ul>
<ul> <li>C. Format for Racaptacle Identification:</li> <li>Minimum Size: 3/8 inch by 1.5 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text: All capitalized unless otherwise indicated.</li> <li>Minimum Text Height: 3/8 inch by</li> <li>Color: Black text on clear background.</li> </ul> PART 3 EXECUTION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. 1. Devices: Outside face of cover. END OF SECTION 260583 SECTION 260581 A. Make conduit connections in accordance with equipment manufacturer's instructions. B. Make conduit connections in accordance with equipment thusitation suitable for temperatures encountered. C. Connect heat producing equipment using flexible conduit. Use liquid-tight flexible conduit with wateright connectors in damp or wet locations. C. Install disconnect switches, control stations, and control devices to complete equipment connection boxes. LING FEECTION 260583 SECTION 26058	<ul> <li>A. Provide GFI protection for all receptacles installed within 8 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles installed in kitchens.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>202 WIRNO DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with spacified weatherproof cover.</li> <li>203 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; liuminated with load on, single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; liuminated with load on, single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>204 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control following square law dimming curve, integral radio frequency intefference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with MA WD 1 and NEMA WD 6, and listed as complying with UL 1472; types and ratings suitable for load control let indicated on the drawings.</li> <li>B. Control: Side control type with separate onoff switch.</li> <li>C. Power Rating, Unless Otherwise Indicated on Required to Control the Load Indicated on the Drawings:         <ul> <li>Lighting</li> <li>Standard Convenience Receptacles: Industrial specification grade, 20A, 125V, NEM 5-20R, listed and labeled as there for using a undiplex as indicated on the drawings.</li></ul></li></ul>
<ul> <li>C. Format for Receptacle Identification:         <ul> <li>Minimum Size: 3/8 inch by 1.5 intene.</li> <li>L. Tot All: spallaced unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ul> </li> <li>PART 3 EXECUTION         <ul> <li>Color: Black text on clear background.</li> </ul> </li> <li>PART 3 EXECUTION         <ul> <li>A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> <li>END OF SECTION 280533             <ul> <li>SECTION 28053</li> <li>SECTION 28053</li> <li>Maintenance.</li> </ul> </li> <li>PART 1 GENERAL - NOT USED         <ul> <li>PART 2 PRODUCTS - NOT USED</li> </ul> </li> <li>PART 3 EXECUTION         <ul> <li>A. Install identification connections in accordance with equipment manufacturer's instructions.</li> <li>Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections in accordance with equipment manufacturer's instructions.</li> <li>Connect heat producing equipment using Wire and cable with insulation suitable for temperatures encountered.</li> <li>Provide receptacle outlet to accommodate connection with attachment plug.</li> <li>Provide receptacle outlet to accommodate contections a dute boxes and equipment witting requirements.</li> <li>Install internonabiock jumpers to complete equipment witting requirements.</li> <li>Install internonabiock jumpers to complete equipment witting requirements.</li> <li>Install internonabiock jumpers to complete equipment witting requirements.</li> <li>Install interinons.</li> <li>Coo</li></ul></li></ul></li></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>C. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>Wiring Devices Installed in Mitchined Spaces: Gray with spacefied weatherproof cover.</li> <li>Wiring Devices Installed in Wet or Damp Locations: Gray with spacefied weatherproof cover.</li> <li>Wall SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Plict Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; timinated with load on; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>C.44 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous ful-same even control followi square landing ingel throw, integra and indig active provide indicated on the drawings.</li> <li>B. Control: Side control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ul> <li>LED Lighting</li> <li>Standard Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, Sigle control type with separate on off switch.</li> <li>Power Rating, Unless Otherwise Indicated on the drawings.</li> <li>Weather Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, Isited and labeled</li></ul></li></ul>
<ul> <li>C. Format for Receptacle Identification:         <ul> <li>Minimum Size: 3/9 inch by 15 inch.</li> <li>Latrick J. Bysel and under a there or other designation indicated.</li> <li>Tatrick J. Bysel and the analysis of the an</li></ul></li></ul>	<ul> <li>A. Provide GFI protection for a larceptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFCI protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Mitchined Spaces: Gray with stainless steel wall plate.</li> <li>C. Wiring Devices Installed in Wet or Damp Locations: Gray with stainless detecting and plate.</li> <li>C. Wiring Devices Installed in Met or Damp Locations: Gray with standard toggle type suitch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Plict Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle type switch actuator and maintained contacts; limitimated with and on; single plots single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>2.04 WALL DIMMERS</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency interference filtering, power failure present myCV, Or generate and compring with UL 1472; types and ratings autable for load controled indicated on the drawings.</li> <li>B. Control: Side control type with separate onioff switch.</li> <li>C. Prower Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the Drawings:         <ul> <li>LED Lighting</li> </ul> </li> <li>Standard Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, listed and labeled as weather resistant type complying with UL 449. Soupherenst 55: S-20R, listed and labeled as tamper resistant type complying with UL 449. Soupherenst 55: S-20R, listed and labeled as ta</li></ul>
<ul> <li>C. Format for Receptacie Identificator:</li> <li>I. Legard: Power source and circuit number on ther designation indicated.</li> <li>I. Legard: Power source and circuit number on ther designation indicated.</li> <li>I. Tet: All captited unless otherwise indicated.</li> <li>I. Tet: All captited numbers otherwise indicated.</li> <li>I. Tet: All captited products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Outside face of cover.</li> <li>END OF SECTION 260553</li> <li>SECTION 260553</li> <li>SECTION 260553</li> <li>SECTION 26057</li> <li>PART 1 GENERAL - NOT USED</li> <li>PART 2 PRODUCTS - NOT USED</li> <li>PART 3 EXECUTION</li> <li>A. Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Make electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Make electrical connections in damp or wet locations.</li> <li>C. Connect heat producing equipment using fixoble conduit. Use liquid-tight flexible conduit with waterlight connectors in damp or wet locations.</li> <li>C. Connect heat producing equipment using fixoble conductions usible for temperatures encountered.</li> <li>Provide receptacle outle to accommodate connection with attachment plug.</li> <li>Provide receptacle outle to accommodate connection and outle boxes and equipment complete equipment equipments.</li> <li>Install terminal block jumpers to complete equipment wing requirements.</li> <li>Install terminal block jumpers to complete equipment wing requirements.</li> <li>Install terminal block jumpers to complete equipment to complete equipment wing requirements.</li> <li>Install terminal block jumpers to complete equipment to ming fisthing of c</li></ul>	<ul> <li>A. Provide GFC protection for receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFC protection for receptacles installed in kitchers.</li> <li>C.Provide GFC protection for receptacles installed in kitchers.</li> <li>C.Wing Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>Wining Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> <li>C.Wining Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> <li>WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle byse switch actuator and maintained contacts; limiting, power failure, single pole single throw, double pole single throw, three way, or four way as indicated on the gravings.</li> <li>A. Wall Dimmers - General Requirements: Solid-state with continuous full-range even control followin square law dimming curve, integral radio frequency types and ratings suitable for load control lob with separate on off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the drawings.</li> <li>L. ED Lighting</li> <li>Z. Gorvenience Receptacles:</li> <li>Standard Gravenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, bisted and labeled as weather resistant type complying with UL 436 Supplement SE subtee for complying with UL 436 Supplement SE subtee Supplement SE subtee for installation in dama grave subtee for installation in dama grave resistant type complying with UL 436 Supplement SE subtee Supplement SE subtee Supplement SE subtee Supplement SE su</li></ul>
<ul> <li>Format for Receptacia Identification:         <ul> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Text All capital unless otherwise indicated.</li> <li>Minimum Text Height: 3/16 inch.</li> <li>Color: Black text on clear background.</li> </ul> </li> <li>PART 3 EXECUTION         <ul> <li>All individual control clear background.</li> </ul> </li> <li>PART 3 EXECUTION         <ul> <li>Devices: Oblative text on control clear background.</li> <li>Part 3 EXECUTION</li> <li>All install identification products to be plainly visible for examination, adjustment, servicing, and maintenance.</li> <li>Devices: Oblative face of cover.</li> </ul> </li> <li>Devices: Oblative face of cover.</li> <li>Devices: Oblative face of cover.</li> <li>BLD OF SECTION 260563             <ul> <li>Section 260563</li> <li>WIRING CONNECTIONS</li> </ul> </li> <li>A face electrical connections in accordance with equipment manufacturer's instructions.</li> <li>Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with wateright connectors in damp or well coations.</li> <li>Connectors the at producing equipment using flexible conduit. Use liquid-tight flexible conduit with wateright connectors in damp or well coations.</li> <li>Connectos the at producing equipment using flexible conduit. Use liquid-tight flexible conduit with wateright connectors in damp or well coations.</li> <li>Connectos the at producing equipment using flexible conduit. Use liquid-tight flexible conduit with wateright connectors in damp or well coations.</li> <li>Connectos the at producing equipment withing requirements.</li> <li>Install disconnect switches, controllers, control stallons, and control devices to complete equipment withing requirements.</li> <liu< td=""><td><ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFC protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with spacefication steel wall plate.</li> <li>C. Wiring Devices Installed in Unfinished Spaces: Gray with spaceficet steel wall plate.</li> <li>C. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> <li>2.03 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle byte switch actuator and maintained contacts; single pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle byte switch actuator and maintained contacts; limitated with indo on single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>C. Mult Dimmers - General Requirements: Solid-state with continuous full-range even control following and pave law dimming ourve, integrating with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Silde control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the drawings.</li> <li>J. LED Lighting</li> <li>Z.6 RECEFTACLES</li> <li>A. Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, silde and labeled as tamper resistant types, single or dupks as indicated on the drawings.</li> <li>J. Temper Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, issel and</li></ul></td></liu<></ul>	<ul> <li>A. Provide GFI protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFC protection for receptacles serving electric drinking fountains.</li> <li>2.02 WIRING DEVICE FINISHES</li> <li>A. Wiring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wiring Devices Installed in Unfinished Spaces: Gray with spacefication steel wall plate.</li> <li>C. Wiring Devices Installed in Unfinished Spaces: Gray with spaceficet steel wall plate.</li> <li>C. Wiring Devices Installed in Unfinished Spaces: Gray with specified weatherproof cover.</li> <li>2.03 WALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle byte switch actuator and maintained contacts; single pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pilot Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggle byte switch actuator and maintained contacts; limitated with indo on single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>C. Mult Dimmers - General Requirements: Solid-state with continuous full-range even control following and pave law dimming ourve, integrating with UL 1472; types and ratings suitable for load controlled indicated on the drawings.</li> <li>B. Control: Silde control type with separate on/off switch.</li> <li>C. Power Rating, Unless Otherwise Indicated or Required to Control the Load Indicated on the drawings.</li> <li>J. LED Lighting</li> <li>Z.6 RECEFTACLES</li> <li>A. Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, silde and labeled as tamper resistant types, single or dupks as indicated on the drawings.</li> <li>J. Temper Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20F, issel and</li></ul>
<ul> <li>C. Format for Recognizate Identification:</li> <li>Ingend: Power source and drived number or other designation indicated.</li> <li>Yet: All capital values otherwise indicated.</li> <li>Molimum Text Height: 3/16 inch.</li> <li>C. Colt: Black text on clear background.</li> </ul> PART 3 EXECUTION 3.01 INSTALLATION A. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance Devices: Outside face of cover. BAD 07 SECTION 28053 WIRING CONNECTIONS PART 1 GENERAL - NOT USED PART 3 EXECUTION 3.01 ELECTRICAL CONNECTIONS A. Make electrical connections in accordance with equipment manufacturer's instructions. B. Make conduct connections to equipment using flexible conduit. Use liquid-light flexible conduit with waterlight connectors in damp or wet locations. C. Connectors in damp or wet locations. D. Provide cord and cap where field-supplied attechment plug is required. F. Install idecontact switches, controllers, control stations, and control devices to complete equipment wring requirements. H. Install terminal block jumpers to complete equipment wring requirements. E. DO F SECTION 260633 SECTION 260633 SECTION 260633 SECTION 260633 SECTION 260631 Sect	<ul> <li>A. Provide GFC protection for all receptacles installed within 6 feet of sinks and other locations as required by the NEC.</li> <li>B. Provide GFC protection for receptacles installed in Kitchens.</li> <li>C. Provide GFC protection for receptacles installed in Kitchens.</li> <li>Wining Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>Wining Devices installed in Minished Spaces: Gray with stainless steel wall plate.</li> <li>Wining Devices installed in Minished Spaces: Gray with specified weatherproof cover.</li> <li>WML SWITCHES</li> <li>A Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggle type switch activates in the drawings pole single throw, double pole single throw, drube pole single thro</li></ul>
<ul> <li>Format for Receptacle Identification:</li> <li>Indimum Ster: 3% Rinch by 15 inches.</li> <li>Legend: Power source and circuit number or other designation indicated.</li> <li>Winimum Text Height: 3/16 inch.</li> <li>Coito: Black Ister on clear background.</li> </ul> PART 3 EXECUTION 3.01 INSTALLATION A. Install identification products to be plainly visible for examination, adjustment, servicing, and minimanoc. 1. Devices: Outside face of rover. END OF SECTION 28053 2.2000 SECTION 28054 2.2000 SECTION 28052 2.2000 SECTION 28053 2.2000 SECTION 280561 2.2000 SE	<ul> <li>A. Provide GF1 protection for receptacles installed in Within 6 feet of sinks and other locations as neurophysical systems of the second syst</li></ul>
<ul> <li>Format for Receptacle identification:         <ul> <li>Impact for Receptacle identification:</li></ul></li></ul>	<ul> <li>A. Provide GF1 protection for all receptacles installed within 6 feet of sinks and other locations as negatively the NEC.</li> <li>Provide GFC1 protection for receptacles installed in kitchens.</li> <li>A. Wing Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>Wing Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.</li> <li>Wing Devices Installed in Unfinished Spaces: Gray with spacefield weatherproof cover.</li> <li>203 VALL SWITCHES</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A. 120/277 V with standard togg by pervise installed in Winstein stage of the single throw, double pole single throw, double pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Piot Light Wall Switches: Industrial specification grade, 20 A. 120/277 V with standard togg by pervision actuator and maintained contactars, illuminated with load on; single pole single throw, double pole sing</li></ul>
<ul> <li>C. Forma for Respected Identification:         <ul> <li>Forma for Respected Identification:                 <ul></ul></li></ul></li></ul>	<ul> <li>A. Provide GF1 protection for all receptacles installed within 6 feet of sinks and other locations as required by the NLC.</li> <li>B. Provide GFC1 protection for receptacles serving electric drinking fountains.</li> <li><b>202 WRING DEVCE FINISHES</b> <ul> <li>A. Wring Devices Installed in Finished Spaces: Gray with stainless steel wall plate.</li> <li>B. Wring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>Wring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>C. Wring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>Wring Devices Installed in Unfinished Spaces: Gray with galvanized steel wall plate.</li> <li>A. Standard Wall Switches: Industrial specification grade, 20 A, 120/277 V with standard toggic byee switch actuator and maintained contacts: Illuminated with load on: single pole single throw, double opt single throw, three way, or four way as indicated on the drawings.</li> <li>B. Pict Light Wall Switches: Industrial specification grade, 20 A, 120/277 V with red illuminated standard toggic byee switch actuator and maintained contacts: Illuminated with load on: single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.</li> <li>B. Dicht Dimmers - General Requirements: Solid-state with continuous full-range even control following square law dimining curve, integral radio frequency lineference filtering, power failure preset memory, air gap switch accessible without removing wall plate, complying with EUA VO 1 and NEDA VO 1 an</li></ul></li></ul>

- c. Finish: White unless otherwise indicated. F. Power Packs for Low Voltage Motion Sensors:
- 1. Description: Plenum rated, self-contained low voltage class 2 transformer and relay compatible with specified low voltage motion sensors for switching of line voltage loads.

2.04 EMERGENCY LIGHTING RELAYS A. Manufacturers:

- 1. Bodine: www.signify.com
- 2. ETC: www.etcconnect.com

2.02 FUSES complete operating system.

# uuu istoonginooring

- h to test a normal power loss condition. Releasing al operation.
- ency operation mode of the device. cts compatible with dimming protocols being
- to remote systems, where indicated, to force htness. Remote systems, where indicated, shall dry contact.
- controlled with non-emergency light fixtures when shall bypass lighting controls and shunt dimmed ency light fixtures to full brightness. itch (BCELTS)
- controlled with non-emergency light fixtures when transfers power from normal to emergency for immed inputs (when present) to force emergency
- acturer, cabling shall be plenum rated.
- abling compatible with system being provided.
- on labeled with associated function, such as "ON" all be identified at each button with associated e/lower symbol, or similar. ctory engraving. Provide engraving with a color that
- y and visual identificaiton. Adhesive labels are not sight of the load controlled, they shall be provided ontrolled in addition to a visual light indicator that
- nder Section 260535 as required for installation of ated, as follows:
- es above finished floor. ove finished floor.
- and held securely in place.
- system. Program according to Owner's
- after system startup and programming by a to perform per the construction documents, and h lists
- Owner's personnel on operation, adjustment, nal lighting control devices Provide a minimum of
- **DN 260923** 262726
- ed within 6 feet of sinks and other locations as d in kitchens.
- electric drinking fountains.
- ray with stainless steel wall plate. Gray with galvanized steel wall plate.
- ons: Gray with specified weatherproof cover. grade, 20 A, 120/277 V with standard toggle type
- n grade, 20 A, 120/277 V with red illuminated ined contacts; illuminated with load on; single pole y, or four way as indicated on the drawings.
- tate with continuous full-range even control following ncy interference filtering, power failure preset ving wall plate, complying with NEMA WD 1 and 472; types and ratings suitable for load controlled as
- switch. equired to Control the Load Indicated on the
- strial specification grade, 20A, 125V, NEMA 5-20R;
- les: Industrial specification grade, 20A, 125V, NEMA ant type complying with UL 498 Supplement SE tions; single or duplex as indicated on the drawings. es: Industrial specification grade, 20A, 125V, NEMA ant type; single or duplex as indicated on the
- : Self-testing, with feed-through protection and light nd loss of protection; listed as complying with UL
- ecification grade, duplex, 20A, 125V, NEMA 5-20R,
- ustrial specification grade, duplex, 20A, 125V, listed and labeled as weather resistant type table for installation in damp or wet locations.
- n, Type 302 stainless steel.
- and edges, with corrosion resistant screws. keted, cast aluminum, with self-closing hinged cover e for use in wet locations with cover closed. eted, cast aluminum, with hinged lockable cover and use in wet locations while in use with attachment
- nder Section 260535 as required for installation of ted, as follows:
- ned floor to center of box. ned floor to center of box.
- d floor or 4 inches above top of counter/backsplash or wall dimmers are installed at the same location vices together under a common wall plate. Provide
- ed and indicated after derating for ganging as
- its utilizing wall dimmers. ON 262726
- 262813
- 1. Fusible Switches up to 600 Amperes: Class RK1, time-delay. 2. Fusible Switches Larger Than 600 Amperes: Class L, time-delay. B. General Purpose Branch Circuits: Class RK1, time-delay. C. Individual Motor Branch Circuits: Class RK1, time-delay. D. Primary Protection for Control Transformers: Class CC, time-delay.
- A. Unless specifically indicated to be excluded, provide fuses for all fusible equipment as required for a

- B. Voltage Rating: Suitable for circuit voltage.
- C. Provide the following accessories where indicated or where required to complete installation 1. Fuseholders: Compatible with indicated fuses.
- 2. Fuse Reducers: For adapting indicated fuses to permit installation in switch designed for fuses with larger ampere ratings. PART 3 EXECUTION
- 3.01 INSTALLATION
- A. Do not install fuses until circuits are ready to be energized.
- B. Install fuses with label oriented such that manufacturer, type, and size are easily read. END OF SECTION 262813 **SECTION 262817** 
  - **ENCLOSED SWITCHES**
- PART 1 GENERAL NOT USED PART 2 PRODUCTS
- 2.01 MANUFACTURERS
- A. ABB/GE
- B. Eaton Corporation
- C. Schneider Electric; Square D Products D. Siemens Industry, Inc
- 2.02 ENCLOSED SAFETY SWITCHES
- A. Description: Quick-make, quick-break enclosed safety switches listed and labeled as complying with
- UL 98; heavy duty; ratings, configurations, and features as indicated on the drawings.
- B. Horsepower Rating: Suitable for connected load. C. Voltage Rating: Suitable for circuit voltage.
- D. Provide with switch blade contact position that is visible when the cover is open.
- E. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E. F. Provide the following features and accessories where indicated or where required to complete installation:
- 1. Hubs: As required for environment type; sized to accept conduits to be installed. 2. Auxiliary Switch: SPDT switch suitable for connection to system indicated, with auxiliary contact operation before switch blades open and after switch blades close.
- PART 3 EXECUTION 3.01 INSTALLATION
- A. Except where indicated to be mounted adjacent to the equipment they supply, mount enclosed switches such that the highest position of the operating handle does not exceed 79 inches above the floor or working platform.

#### END OF SECTION 262817 **SECTION 265100**

# INTERIOR LIGHTING

- PART 1 GENERAL NOT USED PART 2 PRODUCTS
- 2.01 INTERIOR LUMINAIRES
- A. Furnish products as indicated in the Light Fixture Schedule included on the drawings. 1. Generally the project consists of replacing fixtures "1-for-1". Fixture specifications are based on existing drawings and casual field observation, contractor shall field verify the site and confirm the specified can be installed in the locations of the existing fixtures. Notify the Owner, Architect, and Engineer where discrepancies exist.
- B. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, drivers, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.
- C. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, supports, trims, accessories, etc. as necessary for a complete operating system. D. LED Luminaires:
- Components: UL 8750 recognized or listed as applicable. Tested in accordance with IES LM-79 and IES LM-80.
- LED Estimated Useful Life: Minimum of 50,000 hours at 80 percent lumen maintenance, calculated based on IES LM-80 test data. 2.02 EMERGENCY LIGHTING UNITS
- A. Description: Emergency lighting units complying with NFPA 101 and all applicable state and local codes, and listed and labeled as complying with UL 924.
- B. Operation: Upon interruption of normal power source or brownout condition exceeding 20 percent voltage drop from nominal, solid-state control automatically switches connected lamps to integral battery power for minimum of 90 minutes of rated emergency illumination, and automatically recharges battery upon restoration of normal power source.
- C. Battery: 1. Size battery to supply all connected lamps, including emergency remote heads where indicated
- D. Diagnostics: Provide power status indicator light and accessible integral test switch to manually activate emergency operation. 2.03 EXIT SIGNS
- A. Description: Exit signs and similar signs for special purpose applications such as area of
- refuge/rescue assistance. B. Description: Exit signs complying with NFPA 101 and applicable state and local codes, and listed and labeled as complying with UL 924.
- 1. Number of Faces: Single- or double-face as indicated or as required for installed location. 2. Directional Arrows: As indicated or as required for installed location. 2.04 DRIVERS
- A. Dimmable LED Drivers: 1. Dimming Range: Continuous dimming from 100 percent to ten percent relative light output unless dimming capability to lower level is indicated, without flicker.
- 2. Control Compatibility: Fully compatible with the dimming controls to be installed. 2.05 EMERGENCY POWER SUPPLY UNITS
- A. Description: Self-contained emergency power supply units suitable for use with indicated luminaires, complying with NFPA 101 and all applicable state and local codes, and listed and labeled as complying with UL 924.
- B. Operation: Upon interruption of normal power source, solid-state control automatically switches connected fixtures to the emergency power supply for minimum of 90 minutes of rated emergency illumination, and automatically recharges battery upon restoration of normal power source.
- PART 3 EXECUTION 3.01 INSTALLATION
- A. Verify ceiling and wall details from general construction documents prior to ordering luminaires. Provide proper mounting accessories for the intended installation. Install fixture trim tight to surrounding surfaces. Secure to prevent movement.
- B. Suspended Ceiling Mounted Luminaires:
- 1. Secure surface-mounted and recessed luminaires to ceiling support channels or framing members or to building structure. 2. Secure pendant-mounted luminaires to building structure.
- 3. Secure lay-in luminaires to ceiling support channels using listed safety clips at four corners. 4. In addition to ceiling support wires, provide two galvanized steel safety wire(s), minimum 12 gauge, connected from opposing corners of each recessed luminaire to building structure.
- C. Recessed Luminaires: 1. Luminaires smaller than grid openings: Center in acoustical panels unless otherwise indicated
- on reflected ceiling plan. Provide supporting members as required. 2. Luminaires Recessed in Fire-Rated Ceilings: Install using accessories and firestopping materials to meet regulatory requirements for fire rating.
- D. Suspended Luminaires: 1. Install using the suspension method indicated, with support lengths and accessories as required for specified mounting height.
- E. Emergency Lighting Units: 1. Unless otherwise indicated, connect unit to unswitched power from same circuit feeding normal lighting in same room or area. Bypass local switches, contactors, or other lighting controls.
  - END OF SECTION 265100
  - **DIVISION 28 ELECTRONIC SAFETY AND SECURITY SECTION 284600** 
    - FIRE DETECTION AND ALARM
- 1.01 SUBMITTALS

control unit programming.

Contract Documents.

B. Initiating Devices and Notification Appliances:

B. Shop Drawings: Shall include:

C. Inspection and Test Reports:

2. Product Data

PART 2 PRODUCTS

2.01 MANUFACTURERS

instructions, and circuit length limitations.

13. Do not show existing components to be removed.

demonstrating adequate battery power

PART 1 GENERAL

A. Design Documents: Submit all information required for plan review and permitting by authorities having jurisdiction, including but not limited to floor plans, riser diagrams, and description of operation

- 1. Copy (if any) of list of data required by authority having jurisdiction. NFPA 72 "Record of Completion", filled out to the extent known at the time.
- 3. Clear and concise description of operation, with input/output matrix similar to that shown in NFPA 72 Appendix A-7-5-2.2(9), and complete listing of software required.

Circuit layouts; number, size, and type of raceways and conductors; conduit fill calculations;

8. Manufacturer's detailed data sheet for each component, including wiring diagrams, installation

10. Certification by either the manufacturer of the control unit or by the manufacturer of each other

11. Certification by the manufacturer of the control unit that the system design complies with

12. Certification by Contractor that the system design complies with Contract Documents.

spare capacity calculations; notification appliance circuit voltage drop calculations.

4. System zone boundaries and interfaces to fire safety systems. 5. Location of all components, circuits, and raceways; mark components with identifiers used in

List of all devices on each signaling line circuit, with spare capacity indicated.

9. Description of power supplies; if secondary power is by battery include calculations

component that the components are compatible with the control unit.

1. Design Documents, after approval by the Authority having jurisdiction.

Submit inspection and test plan prior to closeout demonstration.

Submit documentation of satisfactory inspections and tests.

3. Submit NFPA 72 "Inspection and Test Form," filled out.

A. Fire Alarm Control Units - Existing - Simplex Fire Control 4010ES Serie

## 1. Same manufacturer as control units.

2.02 FIRE ALARM SYSTEM A. Fire Alarm System: Provide modifications and extensions to the existing automatic fire detection and alarm system: Provide all components necessary, regardless of whether shown in Contract Documents or not. Protected Premises: Entire building shown on drawings.

> 3. Comply with the following; where requirements conflict, the most stringent shall apply. a. ADA Standards.

b. The requirements of the State Fire Marshal. c. The requirements of the local authority having jurisdiction .

Applicable local codes. e. Contract Documents (drawings and specifications). NFPA 101.

NFPA 72; where the word "should" is used consider that provision mandatory; where conflicts between requirements require deviation from NFPA 72, identify deviations clearly on design documents.

h. International Fire Code 4. Evacuation Alarm: Single smoke zone; general evacuation of entire premises.

B. Power Sources: Primary: Dedicated branch circuits of the facility power distribution system.

2. Secondary: Storage batteries. 2.03 EXISTING COMPONENTS

A. Clearly label components that are "Not In Service."

B. Remove unused existing components and materials from site and dispose of properly. 2.04 FIRE SAFETY SYSTEMS INTERFACES

A. Alarm: Provide alarm initiation in accordance with NFPA 72 for the following: 1. Duct smoke detectors.

1. Duct Smoke Detectors: Close dampers indicated; shut down air handlers indicated. Provide remote test station for any duct detector not readily accessible as required by

2.05 COMPONENTS

B. HVAC

A. General: 1. Provide flush mounted units where installed in finish areas; in unfinished areas, surface mounted unit are acceptable.

> a. Surface mounted devices shall be provided with matching backbox from same manufacture

B. Fire Alarm Control Units: Analog, addressable type; listed, classified, and labeled as suitable for the purpose intended.

C. Master Control Unit: As specified for Basis of Design above, or equivalent.

D. Initiating Devices: 1. Addressable Systems:

> Addressable Devices: Individually identifiable by addressable fire alarm control unit. Provide suitable addressable interface modules as indicated or as required for connection to conventional (non-addressable) devices and other components that provide a dry closure output.

E. Notification Appliances: 1. Device Colors a. Wall Mounted: White b. Ceiling Mounted: White c. Exterior: Red PART 3 EXECUTION

3.01 INSTALLATION

A. Install in accordance with applicable codes, NFPA 72, NFPA 70, and Contract Documents.

B. Obtain Owner's approval of locations of devices, before installation. Install wall mounted strobes at 80" to the bottom.

2. Install manual pull stations at 48" to the top. Align with adjacent light switches, where applicable.

#### 3.02 INSPECTION AND TESTING FOR COMPLETION

A. Notify Owner 7 days prior to beginning completion inspections and tests.

B. Notify authorities having jurisdiction and comply with their requirements for scheduling inspections and tests and for observation by their personnel.

C. Provide all tools, software, and supplies required to accomplish inspection and testing. D. Perform inspection and testing in accordance with NFPA 72 and requirements of local authorities; document each inspection and test.

#### 3.03 OWNER PERSONNEL INSTRUCTION

data available during instruction.

A. Provide a minimum of two hours of training to Owner and Owner's Personnel in the Operation and

Maintenance of the system. B. Furnish the services of instructors and teaching aids; have copies of operation and maintenance

END OF SECTION 284600

