

INDUSTRIAL ELECTRICIAN STRUCTURE 2016				moved to
MWA	A	PERFORMS COMMON OCCUPATIONAL SKILLS		
Task	A-1	Performs safety-related functions		
Subtask	A-1.01	Maintains safe work environment	A-1.01	
Subtask	A-1.02	Uses personal protective equipment (PPE) and safety equipment	A-1.02	
Subtask	A-1.03	Performs lock out and tag-out procedures	A-1.03	
Subtask	A-1.04	Identifies environmental conditions	A-1.04	
Task	A-2	Uses tools and equipment	A-2	
Subtask	A-2.01	Uses common and specialty tools and equipment	A-2.01	
Subtask	A-2.02	Uses access equipment	A-2.02	
Subtask	A-2.03	Uses rigging, hoisting and lifting equipment	A-2.03	
Task	A-3	Organizes work		
Subtask	A-3.01	Interprets plans, drawings and specifications	A-3.01	
Subtask	A-3.02	Identifies hazardous locations	A-3.02	
Subtask	A-3.03	Organizes materials and supplies	A-3.03	
Subtask	A-3.04	Plans project tasks and procedures	A-3.04	
Subtask	A-3.05	Prepares worksite	A-3.05	
Subtask	A-3.06	Finalizes required documentation	A-3.06	
Task	A-4	Fabricates and installs support components		
Subtask	A-4.01	Fabricates support structures	A-4.01	
Subtask	A-4.02	Installs brackets, hangers and fasteners	A-4.02	
Subtask	A-4.03	Installs seismic restraint systems	A-4.03	
Task	A-5	Commissions and decommissions electrical systems	A-5	
Subtask	A-5.01	Commissions systems	A-5.01	
Subtask	A-5.02	Performs shutdown and startup procedures	A-5.02	
Subtask	A-5.03	Decommissions systems	A-5.03	
Task	A-6	Uses communication and mentoring techniques	A-6	
subtask	A-6.01	Uses communication techniques	A-6.01	
subtask	A-6.02	Uses mentoring techniques	A-6.02	
MWA	B	INSTALLS AND MAINTAINS GENERATING, DISTRIBUTION, AND SERVICE SYSTEMS		
Task	B-7	Installs and maintains consumer/supply services and metering equipment	B-7	
subtask	B-7.01	Installs single-phase consumer/supply services and metering equipment	B-7.01	
subtask	B-7.02	Maintains single-phase consumer/supply services and metering equipment	B-7.02	
subtask	B-7.03	Installs three-phase consumer/supply services and metering equipment	B-7.03	
subtask	B-7.04	Maintains three-phase consumer/supply services and metering equipment	B-7.04	
Task	B-8	Installs and maintains protection devices	B-8	
subtask	B-8.01	Installs overcurrent protection devices	B-8.01	
subtask	B-8.02	Maintains overcurrent protection devices	B-8.02	
subtask	B-8.03	Installs ground fault, arc fault and surge protection devices	B-8.03	
subtask	B-8.04	Maintains ground fault, arc fault and surge protection devices	B-8.04	
subtask	B-8.05	Installs under and over current voltage protection devices	B-8.05	
subtask	B-8.06	Maintains under and over voltage protection devices	B-8.06	
Task	B-9	Installs and maintains low voltage distribution equipment	B-9	
subtask	B-9.01	Installs low-voltage distribution equipment	B-9.01	
subtask	B-9.02	Maintains low-voltage distribution equipment	B-9.02	
Task	B-10	Installs and maintains power conditioning systems	B-10	
subtask	B-10.01	Installs power conditioning systems	B-10.01	

INDUSTRIAL ELECTRICIAN STRUCTURE 2021				came from
MWA	A	PERFORMS COMMON OCCUPATIONAL SKILLS		
Task	A-1	Performs safety-related functions		
Subtask	A-1.01	Maintains safe work environment	A-1.01	
Subtask	A-1.02	Uses personal protective equipment (PPE) and safety equipment	A-1.02	
Subtask	A-1.03	Performs lock-out and tag-out procedures	A-1.03	
Subtask	A-1.04	Identifies environmental conditions	A-1.04	
Task	A-2	Uses tools and equipment	A-2	
Subtask	A-2.01	Uses common and specialty tools and equipment	A-2.01	
Subtask	A-2.02	Uses access equipment	A-2.02	
Subtask	A-2.03	Uses rigging, hoisting and lifting equipment	A-2.03	
Task	A-3	Organizes work		
Subtask	A-3.01	Interprets plans, drawings and specifications	A-3.01	
Subtask	A-3.02	Identifies hazardous installations	A-3.02	
Subtask	A-3.03	Organizes materials and supplies	A-3.03	
Subtask	A-3.04	Plans project tasks and procedures	A-3.04	
Subtask	A-3.05	Prepares specific location in facility	A-3.05	
Subtask	A-3.06	Finalizes required documentation	A-3.06	
Task	A-4	Fabricates and installs support components		
Subtask	A-4.01	Fabricates support structures	A-4.01	
Subtask	A-4.02	Installs brackets, hangers and fasteners	A-4.02	
Subtask	A-4.03	Installs seismic restraint systems	A-4.03	
Task	A-5	Commissions and decommissions electrical systems	A-5	
Subtask	A-5.01	Commissions systems	A-5.01	
Subtask	A-5.02	Performs shutdown and startup procedures	A-5.02	
Subtask	A-5.03	Decommissions systems	A-5.03	
Task	A-6	Uses communication and mentoring techniques	A-6	
subtask	A-6.01	Uses communication techniques	A-6.01	
subtask	A-6.02	Uses mentoring techniques	A-6.02	
MWA	B	INSTALLS AND MAINTAINS GENERATING, TRANSMISSION, DISTRIBUTION, AND SERVICE SYSTEMS		
Task	B-7	Installs and maintains utility and non-utility/supply services and metering equipment	B-7	
subtask	B-7.01	Installs single-phase utility and non-utility /supply services and metering equipment	B-7.01	
subtask	B-7.02	Maintains single-phase utility and non-utility /supply services and metering equipment	B-7.02	
subtask	B-7.03	Installs three-phase utility and non-utility /supply services and metering equipment	B-7.03	
subtask	B-7.04	Maintains three-phase utility and non-utility /supply services and metering equipment	B-7.04	
Task	B-8	Installs and maintains protection devices	B-8	
subtask	B-8.01	Installs overcurrent protection devices	B-8.01	
subtask	B-8.02	Maintains overcurrent protection devices	B-8.02	
subtask	B-8.03	Installs ground fault, arc fault and surge protection devices	B-8.03	
subtask	B-8.04	Maintains ground fault, arc fault and surge protection devices	B-8.04	
subtask	B-8.05	Installs under- and over-current voltage protection devices	B-8.05	
subtask	B-8.06	Maintains under- and over-voltage protection devices	B-8.06	
Task	B-9	Installs and maintains low-voltage distribution equipment	B-9	
subtask	B-9.01	Installs low-voltage distribution equipment	B-9.01	
subtask	B-9.02	Maintains low-voltage distribution equipment	B-9.02	
Task	B-10	Installs and maintains power conditioning systems	B-10	
subtask	B-10.01	Installs power conditioning systems	B-10.01	

subtask	B-10.02	Maintains power conditioning systems	B-10.02
Task	B-11	Installs and maintains bonding and grounding systems	B-11
subtask	B-11.01	Installs grounding systems	B-11.01
subtask	B-11.02	Maintains grounding systems	B-11.02
subtask	B-11.03	Installs bonding systems	B-11.03
subtask	B-11.04	Maintains bonding systems	B-11.04
subtask	B-11.05	Installs ground fault detection systems	B-11.05
subtask	B-11.06	Maintains ground fault detection systems	B-11.06
Task	B-12	Installs and maintains power generation systems	B-12
subtask	B-12.01	Installs AC (alternative current) generating systems	B-12.01
subtask	B-12.02	Maintains AC generating systems	B-12.02
subtask	B-12.03	Installs DC (direct current) generating systems	B-12.03
subtask	B-12.04	Maintains DC generating systems	B-12.04
Task	B-13	Installs and maintains renewable energy generation and storage systems	B-13
subtask	B-13.01	Installs renewable energy generation and storage systems	B-13.01
subtask	B-13.02	Maintains renewable energy generation and storage systems	B-13.02
Task	B-14	Installs and maintains high voltage systems	B-14
subtask	B-14.01	Installs high voltage systems	B-14.01
subtask	B-14.02	Maintains high voltage systems	B-14.02
Task	B-15	Installs and maintains transformers	B-15
subtask	B-15.01	Installs extra-low-voltage transformers	B-15.01
subtask	B-15.02	Maintains extra-low-voltage transformers	B-15.02
subtask	B-15.03	Installs low-voltage single-phase transformers	B-15.03
subtask	B-15.04	Maintains low-voltage single-phase transformers	B-15.04
subtask	B-15.05	Installs low-voltage three-phase transformers	B-15.05
subtask	B-15.06	Maintains low-voltage three-phase transformers	B-15.06
subtask	B-15.07	Installs high-voltage transformers	B-15.07
subtask	B-15.08	Maintains high-voltage transformers	B-15.08
MWA	C	INSTALLS AND MAINTAINS WIRING SYSTEMS	C
Task	C-16	Installs and maintains raceways, cables and enclosures	C-16
subtask	C-16.01	Installs conductors and cables	C-16.01
subtask	C-16.02	Maintains conductors and cables	C-16.02
subtask	C-16.03	Installs conduit, tubing and fittings	C-16.03
subtask	C-16.04	Installs raceways	C-16.04
subtask	C-16.05	Installs boxes and enclosures	C-16.05
subtask	C-16.06	Maintains conduit, tubing, fittings, raceways, boxes and enclosures	C-16.06
Task	C-17	Installs and maintains branch circuitry and devices	C-17
subtask	C-17.01	Installs luminaires	C-17.01
subtask	C-17.02	Maintains luminaires	C-17.02
subtask	C-17.03	Installs wiring devices	C-17.03
subtask	C-17.04	Maintains wiring devices	C-17.04
Task	C-18	Installs and maintains heating, ventilating and air-conditioning (HVAC) electrical components	C-18
subtask	C-18.01	Connects power to HVAC systems and associated equipment	C-18.01

subtask	B-10.02	Maintains power conditioning systems	B-10.02
Task	B-11	Installs and maintains bonding, grounding and ground-fault protection and detection systems	B-11
subtask	B-11.01	Installs grounding systems	B-11.01
subtask	B-11.02	Maintains grounding systems	B-11.02
subtask	B-11.03	Installs bonding systems	B-11.03
subtask	B-11.04	Maintains bonding systems	B-11.04
subtask	B-11.05	Installs ground-fault protection and detection systems	B-11.05
subtask	B-11.06	Maintains ground-fault protection and detection systems	B-11.06
Task	B-12	Installs and maintains power generating and conversion systems	B-12
subtask	B-12.01	Installs alternative current (AC) generating systems	B-12.01
subtask	B-12.02	Maintains AC generating systems	B-12.02
subtask	B-12.03	Installs direct current (DC) generating and conversion systems	B-12.03
subtask	B-12.04	Maintains DC generating and conversion systems	B-12.04
Task	B-13	Installs and maintains renewable energy generating and energy storage systems	B-13
subtask	B-13.01	Installs renewable energy generating and energy storage systems	B-13.01
subtask	B-13.02	Maintains renewable energy generating and energy storage systems	B-13.02
Task	B-14	Installs and maintains high-voltage systems	B-14
subtask	B-14.01	Installs high-voltage systems	B-14.01
subtask	B-14.02	Maintains high-voltage systems	B-14.02
Task	B-15	Installs and maintains transformers	B-15
subtask	B-15.01	Installs extra-low-voltage transformers	B-15.01
subtask	B-15.02	Maintains extra-low-voltage transformers	B-15.02
subtask	B-15.03	Installs low-voltage single-phase transformers	B-15.03
subtask	B-15.04	Maintains low-voltage single-phase transformers	B-15.04
subtask	B-15.05	Installs low-voltage three-phase transformers	B-15.05
subtask	B-15.06	Maintains low-voltage three-phase transformers	B-15.06
subtask	B-15.07	Installs high-voltage transformers	B-15.07
subtask	B-15.08	Maintains high-voltage transformers	B-15.08
MWA	C	INSTALLS AND MAINTAINS WIRING SYSTEMS	C
Task	C-16	Installs and maintains raceways, cables and enclosures	C-16
subtask	C-16.01	Installs conductors and cables	C-16.01
subtask	C-16.02	Maintains conductors and cables	C-16.02
subtask	C-16.03	Installs conduit, tubing and fittings	C-16.03
subtask	C-16.04	Installs raceways	C-16.04
subtask	C-16.05	Installs boxes and enclosures	C-16.05
subtask	C-16.06	Maintains conduit, tubing, fittings, raceways, boxes and enclosures	C-16.06
Task	C-17	Installs and maintains branch circuitry and devices	C-17
subtask	C-17.01	Installs luminaires	C-17.01
subtask	C-17.02	Maintains luminaires	C-17.02
subtask	C-17.03	Installs wiring devices	C-17.03
subtask	C-17.04	Maintains wiring devices	C-17.04
Task	C-18	Installs and maintains heating, ventilating and air-conditioning (HVAC) electrical components	C-18
subtask	C-18.01	Connects power to HVAC systems and associated equipment	C-18.01

subtask	C-18.02	Installs HVAC controls	C-18.02
subtask	C-18.03	Maintains HVAC electrical components	C-18.03
Task	C-19	Installs and maintains electric heating systems	C-19
subtask	C-19.01	Installs electric heating systems and controls	C-19.01
subtask	C-19.02	Maintains electric heating systems and controls	C-19.02
Task	C-20	Installs and maintains exit and emergency lighting systems	C-20
subtask	C-20.01	Installs exit and emergency lighting	C-20.01
subtask	C-20.02	Maintains exit and emergency lighting systems	C-20.02
Task	C-21	Installs and maintains cathodic protection systems	C-21
subtask	C-21.01	Installs cathodic protection systems	C-21.01
subtask	C-21.02	Maintains cathodic protection systems	C-21.02
MWA	D	INSTALLS AND MAINTAINS ROTATING AND NON-ROTATING EQUIPMENT AND CONTROL SYSTEMS	D
Task	D-22	Installs and maintains motor starters and control devices	D-22
subtask	D-22.01	Installs motor starters	D-22.01
subtask	D-22.02	Maintains motor starters	D-22.02
subtask	D-22.03	Installs motor control devices	D-22.03
subtask	D-22.04	Maintains motor control devices	D-22.04
Task	D-23	Installs and maintains drives	D-23
subtask	D-23.01	Installs AC drives	D-23.01
subtask	D-23.02	Maintains AC drives	D-23.02
subtask	D-23.03	Installs DC drives	D-23.03
subtask	D-23.04	Maintains DC drives	D-23.04
Task	D-24	Installs and maintains non-rotating equipment and associated controls	D-24
subtask	D-24.01	Installs non-rotating equipment and associated controls	D-24.01
subtask	D-24.02	Maintains non-rotating equipment and associated controls	D-24.02
Task	D-25	Installs and maintains motors	D-25
subtask	D-25.01	Installs single-phase motors	D-25.01
subtask	D-25.02	Maintains single-phase motors	D-25.02
subtask	D-25.03	Installs three-phase motors	D-25.03
subtask	D-25.04	Maintains three-phase motors	D-25.04
subtask	D-25.05	Installs DC motors	D-25.05
subtask	D-25.06	Maintains DC motors	D-25.06
MWA	E	INSTALLS AND MAINTAINS SIGNALLING AND COMMUNICATION SYSTEMS	
Task	E-26	Installs and maintains signalling systems	
subtask	E-26.01	Installs fire alarm systems	
subtask	E-26.02	Maintains fire alarm systems	

subtask	C-18.02	Installs HVAC controls	C-18.02
subtask	C-18.03	Maintains HVAC electrical components	C-18.03
Task	C-19	Installs and maintains electric heating systems and controls	C-19
subtask	C-19.01	Installs electric heating systems and controls	C-19.01
subtask	C-19.02	Maintains electric heating systems and controls	C-19.02
Task	C-20	Installs and maintains exit and emergency lighting systems	C-20
subtask	C-20.01	Installs exit and emergency lighting systems	C-20.01
subtask	C-20.02	Maintains exit and emergency lighting systems	C-20.02
Task	C-21	Installs and maintains cathodic protection systems	C-21
subtask	C-21.01	Installs cathodic protection systems	C-21.01
subtask	C-21.02	Maintains cathodic protection systems	C-21.02
MWA	D	INSTALLS AND MAINTAINS ROTATING AND OTHER FIXED EQUIPMENT AND CONTROL SYSTEMS	D
Task	D-22	Installs and maintains motor starters and control devices	D-22
subtask	D-22.01	Installs motor starters	D-22.01
subtask	D-22.02	Maintains motor starters	D-22.02
subtask	D-22.03	Installs motor control devices	D-22.03
subtask	D-22.04	Maintains motor control devices	D-22.04
Task	D-23	Installs and maintains drives	D-23
subtask	D-23.01	Installs AC drives	D-23.01
subtask	D-23.02	Maintains AC drives	D-23.02
subtask	D-23.03	Installs DC drives	D-23.03
subtask	D-23.04	Maintains DC drives	D-23.04
Task	D-24	Installs and maintains other fixed equipment and associated controls	D-24
subtask	D-24.01	Installs other fixed equipment and associated controls	D-24.01
subtask	D-24.02	Maintains other fixed equipment and associated controls	D-24.02
Task	D-25	Installs and maintains motors	D-25
subtask	D-25.01	Installs single-phase motors	D-25.01
subtask	D-25.02	Maintains single-phase motors	D-25.02
subtask	D-25.03	Installs three-phase motors	D-25.03
subtask	D-25.04	Maintains three-phase motors	D-25.04
subtask	D-25.05	Installs DC motors	D-25.05
subtask	D-25.06	Maintains DC motors	D-25.06
MWA	E	INSTALLS AND MAINTAINS SIGNALLING AND COMMUNICATION SYSTEMS	
Task	E-26	Installs and maintains signalling systems	
subtask	E-26.01	Installs fire alarm systems	
subtask	E-26.02	Maintains fire alarm systems	

subtask	E-26.03	Installs security and surveillance systems
subtask	E-26.04	Maintains security and surveillance systems
Task	E-27	Installs and maintains communication systems
subtask	E-27.01	Installs communication systems
subtask	E-27.02	Maintains communication systems
Task	E-28	Installs and maintains building automation systems
subtask	E-28.01	Installs building automation systems
subtask	E-28.02	Maintains building automation systems
MWA	F	INSTALLS AND MAINTAINS PROCESS CONTROL SYSTEMS
Task	F-29	Installs and maintains input/output devices
subtask	F-29.01	Installs discrete input/output devices
subtask	F-29.02	Maintains discrete input/output devices
subtask	F-29.03	Installs analog input/output devices
subtask	F-29.04	Maintains analog input/output devices
Task	F-30	Installs, programs and maintains automated control systems
subtask	F-30.01	Installs automated control systems
subtask	F-30.02	Maintains automated control systems
subtask	F-30.03	Programs automated control systems
subtask	F-30.04	Optimizes systems performance
Task	F-31	Installs and maintains pneumatic and hydraulic control systems
subtask	F-31.01	Installs pneumatic systems
subtask	F-31.02	Maintains pneumatic systems
subtask	F-31.03	Installs hydraulic systems
subtask	F-31.04	Maintains hydraulic systems

subtask	E-26.03	Installs security and surveillance systems
subtask	E-26.04	Maintains security and surveillance systems
Task	E-27	Installs and maintains communication systems
subtask	E-27.01	Installs communication systems
subtask	E-27.02	Maintains communication systems
Task	E-28	Installs and maintains building automation systems
subtask	E-28.01	Installs building automation systems
subtask	E-28.02	Maintains building automation systems
MWA	F	INSTALLS AND MAINTAINS PROCESS CONTROL SYSTEMS
Task	F-29	Installs and maintains input/output (I/O) devices
subtask	F-29.01	Installs discrete input/output (I/O) devices
subtask	F-29.02	Maintains discrete input/output (I/O) devices
subtask	F-29.03	Installs analog input/output (I/O) devices
subtask	F-29.04	Maintains analog input/output (I/O) devices
Task	F-30	Installs, programs and maintains automated control systems
subtask	F-30.01	Installs automated control systems
subtask	F-30.02	Maintains automated control systems
subtask	F-30.03	Programs automated control systems
subtask	F-30.04	Optimizes systems performance
Task	F-31	Installs and maintains pneumatic and hydraulic control systems
subtask	F-31.01	Installs pneumatic control systems
subtask	F-31.02	Maintains pneumatic control systems
subtask	F-31.03	Installs hydraulic control systems
subtask	F-31.04	Maintains hydraulic control systems