



STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PRACTICUM STUDY GUIDE

Rev. 10/22/2024

QUALITY CRAFT WORKER - ELECTRICAL

NOTE: APPLICANT IS RESPONSIBLE TO BRING ALL PERSONAL PROTECTIVE EQUIPMENT TO THE PRACTICUM AND USE IT AS APPROPRIATE.

***(2 ITEMS IF MISSED ARE AUTO-FAIL)**

1. DEMONSTRATE ABILITY TO INTERPRET & IDENTIFY TYPICAL LEGEND SYMBOLS ON TRAFFIC SIGNAL PLAN AND BLUEPRINT (15MINS MAX)
2. PROGRAM 8-PHASE CONTROLLER TO THE SIGNAL PLAN (25MINS MAX)
3. TROUBLESHOOT TRAFFIC CABINET FAILURE (10MINS MAX)
4. DEMONSTRATE THE ABILITY TO INSTALL AND INCORPORATE GRIDSMART LAYOUT (15 MINS MAX)
5. DEMONSTRATE ABILITY TO TROUBLESHOOT STREET LIGHT CIRCUIT MALFUNCTION (10MINS MAX)
6. DEMONSTRATE ABILITY TO WIRE AN ENCLOSURE (10MINS MAX)
7. DEMONSTRATE ABILITY TO WIRE A LIGHTING CONTACTOR (10MINS MAX)
8. DEMONSTRATE ABILITY TO WIRE A SIGNAL HEAD WITH ADVANCE GREEN ARROW (10MINS MAX)
9. DEMONSTRATE GENERAL KNOWLEDGE OF ELECTRICAL CODES & ILLUMINATION (15MINS MAX) **(2 ITEMS ARE AUTO-FAIL)**

TRAFFIC SIGNAL CABLE COLOR ASSIGNMENTS

SIGNAL ASSEMBLY AND CABLE USED	SIGNAL FUNCTION	ARTERY 1	ARTERY 2	SIDESTREET 1	SIDESTREET 2
2 - WAY 9 CONDUCTOR	RED	RED		BLACK	
	YELLOW	ORANGE		WHITE / BLACK	
	GREEN	GREEN		BLUE	
		GREEN / BLACK *		RED / BLACK *	
	NEUTRAL	WHITE			
3 - WAY 12 CONDUCTOR	RED	RED	RED / BLACK	BLACK	
	YELLOW	ORANGE	ORANGE / BLACK	WHITE / BLACK	
	GREEN	GREEN	GREEN / BLACK	BLUE	
		BLUE / BLACK *	BLACK / WHITE *		
	NEUTRAL	WHITE			
4 - WAY 15 CONDUCTOR	RED	RED	RED / BLACK	BLACK	RED / WHITE
	YELLOW	ORANGE	ORANGE / BLACK	WHITE / BLACK	BLACK / WHITE
	GREEN	GREEN	GREEN / BLACK	BLUE	GREEN / WHITE
		BLUE / BLACK *		BLUE / WHITE *	
	NEUTRAL	WHITE			

* SPARE CONDUCTORS

PEDESTRIAN SIGNAL CABLE COLOR ASSIGNMENTS

SIGNAL ASSEMBLY AND CABLE USED	SIGNAL FUNCTION	COLOR
WALK SIGNAL WITH PUSHBUTTON 5 CONDUCTOR	DONT WALK	RED
	WALK	GREEN
	NEUTRAL FOR WALK SIGNAL	WHITE
	PED PUSHBUTTON	BLACK
	NEUTRAL FOR PUSHBUTTON	ORANGE
TRAFFIC SIGNAL WITH PUSHBUTTON 7 CONDUCTOR	RED	RED
	YELLOW	ORANGE
	GREEN	GREEN
	NEUTRAL FOR TRAFFIC SIGNAL	WHITE
	PED PUSHBUTTON	BLACK
	NEUTRAL FOR PUSHBUTTON	WHITE / BLACK
	**	BLUE / BLACK

** SPARE CONDUCTOR. IF 14/7 FEEDS MORE THAN ONE BUTTON, SPLIT THE BUTTONS AND USE BLUE / 14TH BLACK TRACER FOR THE ADDITIONAL BUTTON. ITEM #1105007A THRU. ITEM #1105354A