Finite State Machine Analysis:

Creating and Assigning States

States	Q2	Q1	Q0	LED Output Light
Green	0	0	0	Green
Yellow	0	0	1	Yellow
Red	0	1	0	Red
Red + Walk	0	1	1	Red + White
Power Saving	1	0	0	Blue

State Transition Table:

Current State (Q2,Q1,Q0)	State Name	P (Power Save)	W (Walk Button)	Next State (Q2*,Q1*, Q0*)	Next State Name	Outputs (G, Y, R, W, PS)
000	Green	0	X	001	Yellow	10000
000	Green	1	X	100	Power-Saving	00001
001	Yellow	0	X	010	Red	01000
001	Yellow	1	X	100	Power-Saving	00001
010	Red	0	X	000	Green	00100
010	Red	0	1	011	Red+Walk	00100
010	Red	1	X	100	Power-Saving	00001
011	Red + Walk	0	X	000	Green	00010
011	Red + Walk	1	X	100	Power-Saving	00001
100	Power Saving	0	X	000	Green	00001
100	Power Saving	1	X	100	Power-Saving	00001