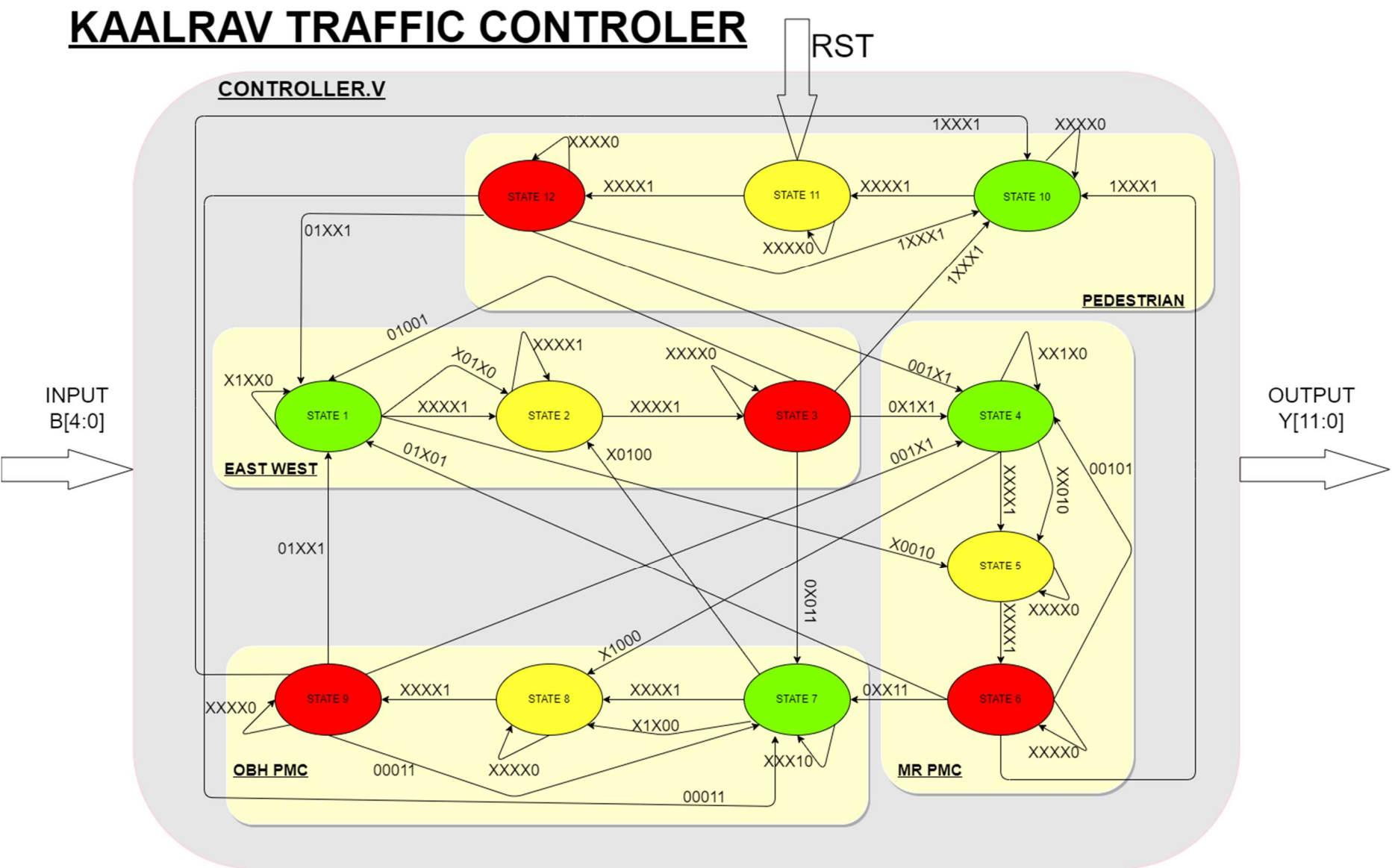


DESIGN DOC – KAALRAV CONTROLLER

STATE DIAGRAM



STATE DETAILS

STATE DESCRIPTION	BINARY OUTPUT
STATE 1: EW GREEN	100 001 001 001
STATE 2: EW YELLOW	010 001 001 001
STATE 3: EW RED, ALL RED	001 001 001 001
STATE 4: MR PMC GREEN	001 100 001 001
STATE 5: MR PMC YELLOW	001 010 001 001
STATE 6: MR PMC RED, ALL RED	001 001 001 001
STATE 7: OBH PMC GREEN	001 001 100 001
STATE 8: OBH PMC YELLOW	001 001 010 001
STATE 9: OBH PMC RED, ALL RED	001 001 001 001
STATE 10: PEDESTRIAN GREEN	001 001 001 100
STATE 11: PEDESTRIAN YELLOW	001 001 001 010
STATE 12:PEDESTRIAN RED, ALL RED	001 001 001 001

INPUT DETAILS

B[4:0]

B[0] => PEDESTRIAN SENSOR (1 IF ON) (ONLY RESET IN STATE 10)

B[1] => EW ROAD SENSOR (1 IF CAR, 0 IF NO CAR)

B[2] => MR PMC ROAD SENSOR (1 IF CAR, 0 IF NO CAR)

B[3] => OBH PMC ROAD SENSOR (1 IF CAR, 0 IF NO CAR)

B[4] => TIMER INPUT (0 IF TIME LEFT, 1 IF TIME OUT)

RST => IF ON, GO TO STATE 11

OUTPUT DETAILS

Y[11:0]

Y[2:0] => {RED, YELLOW, GREEN} OF EW

Y[5:3] => {RED, YELLOW, GREEN} OF MR PMC

Y[8:6] => {RED, YELLOW, GREEN} OF OBH PMC

Y[11:9] => {RED, YELLOW, GREEN} OF PEDESTRIAN

DESIGN NOTES

- MOORE STATE MODEL IS USED TO MODEL GIVEN CONTROLLER
- ALL PEDESTRAIN BUTTONS ARE OR'ED AND ONCE ON (1) CAN ONLY BE RESET IN STATE 10
- ALL STATES RESET THE TIMER AND SET THEIR OWN TIME OUT LIMIT
- IF RESET => GO TO STATE 11
- THE LIGHTS ARE GIVEN PRIORITY USING ROUND ROBIN