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**Topic: Traffic light system**

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| **Functional Requirements** | |
| Number | Description |
| TF.FR.1 | Shall include button for emergency case (Fire truck, Military vehicle, Police car, Ambulance) which help the police to control the vehicle traffic. |
| TF.FR.2 | Shall include emergency mode in which red time is truncated to improve safety and expedite the movement of authorized emergency vehicles and include a display screen “Emergency” that indicate to emergency vehicle drivers whether preemption has been granted or not. |
| TF.FR.3 | Shall support different timings for peak and off-peak traffic hours.  + Peak hours: Green (60 secs), Yellow (3 secs), Red (30 secs).  + Off-peak hours: Green (40 secs), Yellow (3 secs), Red (35 secs). |
| TF.FR.4 | Shall control traffic using actuated timing as specified in the plans, and under central control where specified. The signal shall use standard red-yellow-green indications. |
| TF.FR.5 | Shall operate normally after emergency case. |
| TF.FR.6 | Shall be able to communicate with product by using software to operate the traffic lights. |
| **Non-functional Requirements** | |
| Number | Description |
| TF.NFR.1 | Shall include display screen, no smaller than 3.4 inches. |
| TF.NFR.2 | Shall be fully functional and operational under 100% humidity. |
| TF.NFR.3 | Shall operate with single power supply. |
| TF.NFR.4 | Cost is smaller than 400.000 VND. |