

6. Traffic and Transportation Related Problems

According to the study of traffic and transportation conditions, the interviews from the related parties as well as the locals, and the review of related literatures towards the traffic and transportation related problems, present traffic and transportation related problems in the city could be classified as follows;

- Traffic congestion
- Unserved conditions for street users.
- Lack of management plan to support public transportation services.
- Lack of management plan to support freight transport.
- Lack of management plan to support Phitsanulok Livable City leisure traveling aided.
- Improper implementation strategies towards the concepts of Phitsanulok Amazing City.
- Lack of road network plan for newly developed area in case of academic.

6.1 Traffic Congestion

Traffic congestions arose due to several reasons; high traffic volume, missing link in road network, the high density of the traffic, and ineffective traffic management which resulted in longer delays and congestion. Most problems found in Phitsanulok are listed as follows;

6.1.1 Traffic Congestion along the Nan River Banks: Due to the cutting by Nan River through the town; therefore, it is inevitably to commute across the major bridges; Naresuan, Ekatotsarot, and Supun Kallaya Bridges which had limited capacity.

6.1.2 Traffic Congestion at Railway Grade Crossing: Longer delays were observed at crossings, especially in the rush hour where some trains pass by causing serious traffic congestion.

6.1.3 Traffic Congestion on the Highway No 12: From the studies of the capacity of the Highway No 12, it was found that there are still reserved capacity for the future traffic expansion (v/c ratio ranged between 0.27 – 0.59), but various traffic problems still exist, especially the median openings and intersections, e.g., Lotus shopping center, Kok Chang intersection, Bus terminal intersection, and street to Amarin Lagoon hotel.

6.1.4 Traffic Congestion at Baromtrai Lokkanart Road: By comparison, traffic volume was increased from the previous study but capacity was still the same. This causes poor traffic conditions, especially during peak hour.

6.1.5 Failures towards Traffic Congestion Management: The failures towards traffic congestion management are listed as follow;

- Channelization Management Problems at intersections
- Parking Spaces Management Problems and double-parking
- Traffic signs not following standard or being obstructed
- Inappropriate access road which lay opposite to the intersection of Wat Chan Tawan Ork, and PTT gas station next to the Bus terminal.

6.1.6 The Delay of Road Construction as suggested in Phitsanulok Master Plan: From the survey, it was found that there are still many roads not being built and caused traffic delay in the inner city road network.

6.1.7 Private Bus Stating in the City Street: In the past, there was a private bus company which operated the domestic transportation routes and located on Ekatotsarot Rd. near the train station which belongs to Phitsanulok Yarn Yon Tour Company. However, due to the substantial growths in transportation of the bus services, various private companies flourished within the city areas including Win Tour Company, or Cherd Chai Tour Company which resulted in more traffic congestion within the city.

6.1.8 Incoming Trucks during Rush Hours: Since Phitsanulok city is an economic center, many big-size business holders have the necessities to bring in the products to keep in their nearest warehouses which most of them locate in town affecting the traffic flows in town during the rush hours.

6.1.9 Poor Road Conditions: The examples of physical problems of the road conditions are listed as follows;

- Surface deterioration
- Narrowed road width
- Improper corner radious
- Improper engineering design at “Hor Narika”
- Improper planning towards water draining

6.2 Safety of Street Users

The safety of street users damages lives and safety both towards the physical appearances and the assets. Major problems arose from the road physical conditions, and the behaviors of the street users.

6.2.1 Black spots: Crucial areas that accidents may arise easily included 7 points listed in the table as follows;

Table 6.1 Black spots and their causes

RANK	AREAS	PROBLEMS
1	INDO-CHINA INTERSECTION	- IMPROPER CHANNELING AND IMPROPER TURNING POINTS MANAGEMENT
2	RAIL CROSSING IN FRONT OF THE ARMY CAMP 46	- TOO NARROW CROSSROADS THROUGH THE RAILWAYS ESPECIALLY THE CROSSROADS THROUGH THE RAILWAY ON BUNG-PRA ROAD WHERE THE VEHICLES COME WITH THEIR HIGH SPEED DRIVING AFFECTING LIVES OF THE PASSENGERS
3	IN FRONT OF BIG C SUPER CENTER	- IMPROPER INGRESS WHICH LOCATES CLOSE TO MEDIAN OPENING
4	BUNG PRA CROSSING BRIDGE	- IMPROPER CHANNELING ESPECIALLY AT THE CROSS ROADS THROUGH THE RAILWAYS
5	CROSSING BRIDGE TO THE AIRPORT	- IMPROPER DESIGN TOWARDS THE TURNING POINT SIGNED AS “S” ENGLISH ALPHABET.
6	HOR NARIKA ROUNDABOUT	- DIFFICULTIES IN TURNING AROUND THE CLOCK TOWER DUE TO IMPROPER TRIANGLE DESIGN
7	TRAIN STATION ROUNDABOUT	- IMPROPER PARKING SPACES MANAGEMENT
8	AMARIN LAGOON HOTEL	- IMPROPER CHANNELING AND IMPROPER TURNING POINTS MANAGEMENT
9	IN FRONT OF TESGO LOTUS	- AN ENTRANCE AND EXIT POSITION STAGGERED WITH U-TURN
10	SHAPE CURVE AFTER BAAN KLONG	- U-TURN POSITION NEAR SHAPE CURVE

6.2.2 The Lack of Traffic Disciplines

- Jaywalker
- Over loaded number of motorcycle passengers
- Ignorance in using daytime light, and ignorance of wearing helmet
- Ignorance of fastening the safety belt

- Ignorance in using turning signal
- Ignorance of driving on the indicated lane
- Ignorance of traffic signs

6.3 Problems towards Public Transportation Management

Mainly, the problems towards Phitsanulok Public Transportation Management are due to improper strategic planning, the lack of serious law enforcement, and the lack of effective transportation networks which can be shown as examples as follows;

6.3.1 Public Buses: Only private organizations perform full authorities for public bus services which resulted in the high ticket price whereas some routes have too few commutes which are not worth for the investment causing the lack of public bus services or inconvenience.

6.3.2 Parking Spaces for public school buses: The problem towards the parking spaces for public school buses occurred during the rush hours both in the morning and in the late afternoon.

6.3.3 Multi-modal Facility: The multimodal supporting facilities have to be improved since Phitsanulok is becoming the regional transportation hub.

6.4 Problems towards Transport Logistics Management

At present, part of traffic congestion within the city arises from the incoming trucks which bring the products to store in the warehouses which locate within the city. Proper arrangements are required for future planning.

6.5 Problems towards Tourism Supporting Transportation System

Phitsanulok has various archeological sites and many interesting tourist attractions, especially at Wat Yai. Effective management plans are therefore required to implement tourism supporting transportation systems.

6.6 Problems towards the Livable City Campaign

The support from both government and private sectors are strongly required especially towards the non-motorized modes. From the surveys, it was also found that there were lots of low quality pavement constructions as well as inappropriateness in cycling lanes.

6.7 Problems towards Ineffective Land Use Planning towards the Expansion of the City

Due to the unexpected situation, there are substantial growths towards the expansion and the movement of there important educational institutes to be located out of town casing

unplanned traffic management especially on the Highway No.117 where locates Naresuan University, and around the bypass on the East side where there locates Rajjaphat Phiboonsongklam Institute , and Phitsanulok Pittayakom School.

6.7.1 Problems towards Traffic Networks at Naresuan University: The serious problems occurred along the two sides of irrigation channel due to very limited capacity that exceed of the commuters' demands.

6.7.2 Problems towards the communities close to high speed highway: Due to the numbers of roads passing by the main roads which connect to the areas of the university and schools, accidents and traffic congestions may easily arise.