



DEPARTMENT OF HIGHWAYS  
BY BUREAU OF INTERNATIONAL  
HIGHWAYS COOPERATION

# Progress of Highway Development in Thailand

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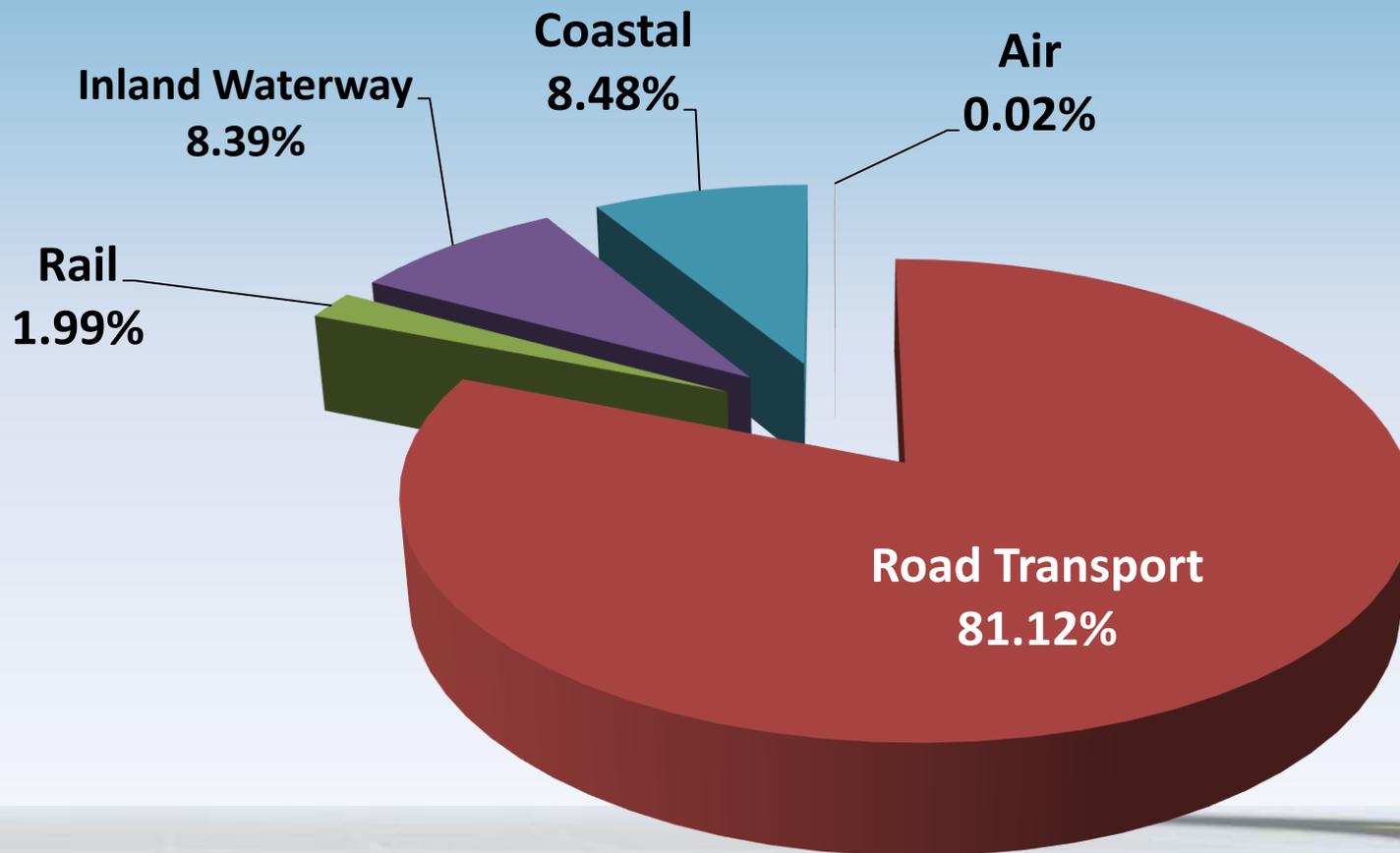
# Importance of Road Network

- Road network in Thailand is the main transportation mode that has a significant impact on wellness and economic growth of the country.





## Thailand's Domestic Freight Transport by Mode (as of 2017)



Source: NESDB



# Background of Highways Development

- In the past, Thailand did not have a systematic plan for highway development.
- However, in 1962, the Thai Government established the National Economic and Social Development Board (NESDB). It played an essential role in formulating 5-year plans for every section of investment and development, including the infrastructure development .
- Since then, Thailand has proceeded to implement plans for the development of highways in concurrence with the National Economic and Social Development Plan.
- The current strategic plan for highway development is under Thailand's 20-year National Strategy and 20 Years Thailand Transport System Development Strategy (2018-2037).



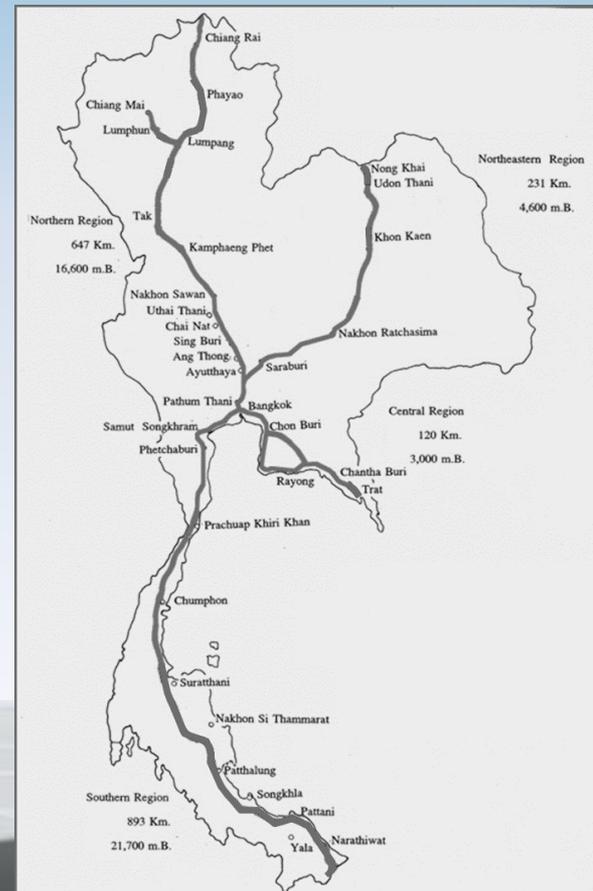
# Phase of Highways Development

- 1<sup>st</sup> - Create the Arterial Highway Network
- 2<sup>nd</sup> - Extend the Additional Road from Arterial Highway Network
- 3<sup>rd</sup> - Upgrade Efficiency of the Network
  - Road Safety
  - Inter-city Motorway Development



# The 1<sup>st</sup> Phase of Highways Development

- From 1950s to 1980s, the initial implementing plan is to create the arterial highway network that links the regions in Thailand.





# The 2<sup>nd</sup> Phase of Highways Development

- Next, the highway development in Thailand intensely focused on extending the road network through the provinces, districts and rural areas.
- In 1987, Thailand experienced the significant economy expansion. The economic growth caused increased massive traffic volume, result in severe road congestion on arterial route and main cities.





# Implementation

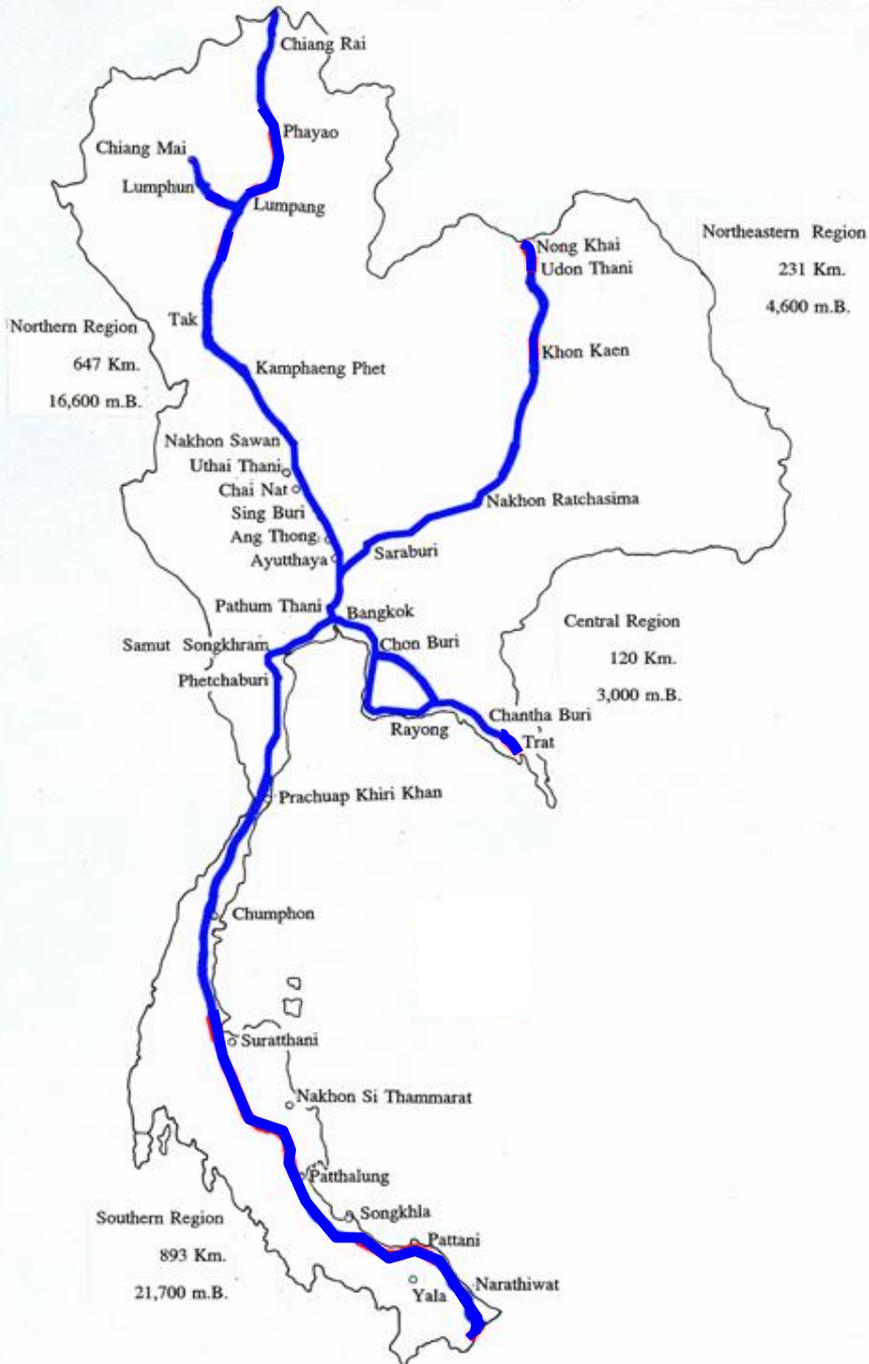
- To cope with the congestion, additional traffic lanes were provided on highways where the volume of traffic cannot be handled by the existing facility.
- In 1993, Thai Government approved the Four-Lane Highways Widening Project ***Phase I***.
- The ***Phase II*** of Four-Lane Highways Widening Project was approved subsequently in 1995.





# Four-Lane Highway Widening Projects (Phase I)

- Arterial highways improvement
- Total length 1,891 km.
- Construction cost 45,900 MB.
- Projects had been completed





## แผนที่โครงข่ายทางสายหลัก 4 ช่องจราจร ระยะที่ 2

DEMOCRATIC PEOPLE'S REPUBLIC OF LAOS

THE UNION OF MYANMAR

KAMPUCHEA

GULF OF THAILAND

MALAYSIA

### โครงการก่อสร้างทางสายหลักให้เป็น 4 ช่องจราจร ระยะที่ 2

- โครงการที่ 1 : นครสวรรค์ - พิษณุโลก - น่าน / อ.จ.ว
- โครงการที่ 2 : อ.แม่สอด - มุกดาหาร
- โครงการที่ 3 : สระบุรี - เพชรบูรณ์ - หนองคาย - เดอ
- โครงการที่ 4 : บ.พินทอง - ชายแดนไทยกัมพูชา
- โครงการที่ 5 : กาจนบุรี - สระบุรี
- โครงการที่ 6 : นครสวรรค์ - ชองแม็ก
- โครงการที่ 7 : อ.สีคิ้ว - มุกดาหาร
- โครงการที่ 8 : สุราษฎร์ธานี - อ.หาดใหญ่ (ทางหลวงหมายเลข 43)
- โครงการที่ 9 : อุบลราชธานี - พัทลุง  
(รวม อ.ห้วยยอด - นครศรีธรรมราช)
- โครงการที่ 10 : เดช - นครพนม
- โครงการที่ 11 : โครงการอื่นๆ

### โครงข่ายอื่นๆ :

หมายเลขทางหลวง	ชื่อสายทาง
11	บ.สายหลัก - อ.วังทอง
101	สุโขทัย - อ.สวรรคโลก
201	อ.สีคิ้ว - ชัยภูมิ
201	อ.แก่งกระจาน - อ.ชุมแพ
4	ชุมพร - ระนอง
401, 415	สุราษฎร์ธานี - หังงา



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# Four-Lane Highway Widening Projects (Phase II)

- 11 Extensive network throughout Thailand
- Total length 5,255 km.
- Construction cost (approx.) 103,300 MB.
- Projects is ongoing with 78.45% completed.



# The 3<sup>rd</sup> Phase of Highways Development

- For the 3<sup>rd</sup> or current phase, Thailand is improving the efficiency of the highways.
- Apart from the mobility performance, road safety and intercity motorway implementation is also considered as a vital issue.





# Road Safety Practices and Measures in Thailand

- In term of highways development, Thailand has implemented the safety practices and measures for road safety as follows:
  - For corrective measure, after the accident occurred, the accident investigation will be conducted, then the safety condition around the area will be improved such as lights, optical speed bar, red pavement, speed notification, add-on variable message sign .
  - For preventive measure, the roads were basically designed base on safety standard and installed by the compulsory safety equipment.
  - Moreover, the risk spot will be identified. The location of road assessment can be used for verifying the hazard points on the road by checking the installation of the safety equipment at the specified coordinates or the alignment of the road. Then, the safety condition will be improved.



**Red Pavement**  
**: Suggestion + warning to drivers**



**Optical speed bar : Speed reduction**



**Speed notification**  
**: Speed reduction**





# Intercity Motorways Development Plan

- To deal with the increase in the number of vehicles and the demand for road transport, the Thai Government issued a cabinet resolution in 1997 detailing the Intercity Motorway Development Master Plan. The master plan has been updated and revised in 2017 to be a 20-year Intercity Motorway Development Master Plan for the period 2017 – 2036.





# 20-year Intercity Motorway Development Master Plan (2017 – 2036)

- 21 Routes
- Total length 6,612 km.



สายทาง	จำนวน (กิโลเมตร)
M2	704
M3	465
M4	610
M5	853
M6	540
M7	153
M8	1,103
M9	165
M51	53
M52	42
M53	48
M61	288
M62	78
M71	204
M72	216
M81	164
M82	74
M83	191
M84	95
M91	254
M92	312
<b>รวมทั้งสิ้น</b>	<b>6,612</b>

21 Routes	Distance (Kilometres)
M2	Tak-Mukdahan 704 km.
M3	Surin – Bueng Kan 465 km.
M4	Nakhon Sawan – Ubon Ratchathani 610 km.
M5	Uttaphimuk Elevated Tollway – Bang Pa-in – Chiang Rai (Mae Sai/Chiang Khong Checkpoints) 853 km.
M6	Bang Pa-in – Nong Khai 540 km.
M7	Bangkok – Ban Chang 153 km.
M8	Nakhon Pathom – Narathiwat (Su-ngai Kolok Checkpoint) 1,103 km.
M9	Kanchanaphisek Road (Second Outer Ring Road) 165 km.
M51	Chiang Mai – Lampang (Chae Hom District) 53 km.
M52	Suphan Buri – Chai Nat 42 km.
M53	Kanchanaphisek (Western Section) – Bang Pa Han 48 km.
M61	Chon Buri – (Laem Chabang Port) – Nakhon Ratchasima 288 km.
M62	Kanchanaphisek Road (Eastern Section) – Saraburi 78 km.
M71	Kanchanaphisek Road (Eastern Section) – Sa Kaeo (Arariyapathet Checkpoint) 204 km.
M72	Chonburi – Trat 216 km.
M81	Bang Yai – Kanchanaburi (Pu Nam Ron Checkpoint) 164 km.
M82	Kanchanaphisek Road (Western Section) – Pak Tho 74 km.
M83	Surat Thani – Phuket 191 km.
M84	Songkha – Thailand – Malaysia Border (Sadao Checkpoint) 95 km.
M91	Third Outer Ring Road 254 km.
M92	Chonburi – Saraburi – Nakhon Pathom 312 km.





# 20-year Intercity Motorway Development Master Plan (2017 – 2036)

 **First Phase (2017-2026):**  
**3,304 km.**

 **Next Phase (2027-2039):**  
**3,118 km.**

ระยะแรก 10 ปี (พ.ศ. 2560-2569): 3,304 กม.  
ระยะถัดไป (พ.ศ. 2570-2579): 3,118 กม.

First Phase (2017-2026): 3,304 km.  
Next Phase (2027-2036): 3,118 km.





# Intercity Motorways Development Plan

- The tolled roads with fully controlled access will
  - facilitate the road transport by saving the time and cost of transport
  - lower the road accidents by separating the through traffic with fast speed from the local traffic with the slow speed
  - reduce the fiscal burden of the government for construction and maintenance by collecting the toll





# Intercity Motorways Development Plan

- Currently, total length of completed intercity motorway in Thailand is 146 km. including M9 Outer Ring Road and M7 Bangkok-Pattaya.
- The ongoing projects include:
  - M7 Pattaya - Map Ta Phut (33 km.)
  - M6 Bang Pa In – Nakorn Ratchasima (196 km.)
  - M81 Bang Yai – Kanchanaburi (178 km.)
  - M84 Hat Yai – Sadao (95 km.)





# Public Private Partnership (PPP)

- To lower the fiscal burden and, the government policy encourages private participation under the Private Investments in State Undertakings Act B.E. 2556 (2013).
- The private sector's roles shall include:
  - Motorway operation and maintenance (O&M)
  - Motorway rest area investment and management





**Thank you**

