ONGOING PPP ROAD INFRASTRUCTURE PROJECTS OF TURKEY
TEM-TER JOINT EXPERT MEETING
BAD GASTEIN, 09 OCT 2013
GENERAL OVERVIEW of ROAD NETWORK

ROAD INFRASTRUCTURE INVESTMENTS

VISION 2023 PPP PROJECTS

ONGOING PPP PROJECTS
The road network excluding urban roads is about 385,000 km in length.
- Total road network is 65,611 km.
- 34.4% of total road network (22,601 km) is dual carriageway

- Road Density: 50 km / 100 km² (Excl. Urban Roads)
- Total Asset Value: 62 Billion €
- Motorway Density: 2.85/1000 km²
Turkish Road Network under General Directorate of Turkish Highways’ responsibility.
ROAD INFRASTRUCTURE INVESTMENTS

PERCENTAGE OF GDP USED FOR ROAD INFRASTRUCTURE INVESTMENT

<table>
<thead>
<tr>
<th>Year</th>
<th>Investment (Euro)</th>
<th>GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1,301</td>
<td>0.40</td>
</tr>
<tr>
<td>2004</td>
<td>1,491</td>
<td>0.42</td>
</tr>
<tr>
<td>2005</td>
<td>1,956</td>
<td>0.49</td>
</tr>
<tr>
<td>2006</td>
<td>2,338</td>
<td>0.57</td>
</tr>
<tr>
<td>2007</td>
<td>2,298</td>
<td>0.52</td>
</tr>
<tr>
<td>2008</td>
<td>3,216</td>
<td>0.72</td>
</tr>
<tr>
<td>2009</td>
<td>4,015</td>
<td>0.85</td>
</tr>
<tr>
<td>2010</td>
<td>5,331</td>
<td>1.03</td>
</tr>
<tr>
<td>2011</td>
<td>5,857</td>
<td>1.19</td>
</tr>
<tr>
<td>2012</td>
<td>5,435</td>
<td>0.88</td>
</tr>
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</table>
1. Staying competitive by reducing travel times and transport costs
2. Providing uninterrupted and safe road transportation
3. The improvement of mobility and road user comfort
4. Facilitating the distribution of economic prosperity to all regions of the country
The primary objectives of dual carriageway road construction:
* to reduce traffic accident fatalities and serious injuries due to head-on collision,
* to improve the level of service affected by inadequate capacity.

The length of dual carriageway roads opened to traffic has reached to 16500 km including motorways since 2003.

General Directorate of Highways started the implementation of a highway upgrading program in 2003 involving the upgrading of existing single carriageway into dual carriageway.
- Total length of TEM road network 6941 km composing of 28% of TEM Network
- Almost all TEM network is in dual carriageway standards with Bituminous Asphalt Hot Mix. (2013)
ROAD INFRASTRUCTURE INVESTMENTS
MOTORWAYS
2023 VISION IN 100TH ANNIVERSARY OF THE FOUNDATION OF TURKISH REPUBLIC.

- Population: 85 Million
- GDP per Capita: 25,000 $
- The world's 10th largest economy: GDP 2 Trillion $
- 500 Billion US $ Export

2023

- Mobility
  - 378 Billion passenger x km
  - 422 Billion ton x km

- Traffic Safety
  - Fatality per 100 Million VehiclexKm < 1

- 70 000 Km Road Network paved by BHM

- 5550 Km New Motorway by BOT
  - Motorway Network 7827 km
  - 1000 Km² 10.1 Km

- Dual Carriageway
  - Road Network with a length of 36827 Km

- 2023
  - 5.72 5.71 5.51 5.39 5.43 4.61 4.41 3.69 3.24 2.63
BUILD-OPERATE-TRANSFER PROJECTS 2023

Yıl Projeleri Kapsamında Yapım Çalışmalara Başlanan Projeler (KM)

1 - Gebze-Orhangazi-İzmir Otoyolu . 421
2/a - Kuzeý Marmara Otoyolu /Odayeri-Paşaköy Kesimi (3. Böğaz Köprüsü Dahil) 95
3 - Sabuncubeli Tunel 7
4 - Ankara-Niğde Otoyolu
5 - Ankara-Kînkale-Deîle-Samsun Otoyolu
6 - Aydîn-Denizli-Burdur Otoyolu
7 - Ankara-İzmir Otoyolu
2/b - Kuzeý Marmara Otoyolu

Yıl Projeleri Kapsamında Planlanan Projeler

4 - Ankara-Niğde Otoyolu 342
5 - Ankara-Kînkale-Deîle-Samsun Otoyolu 472
6 - Aydîn-Denizli-Burdur Otoyolu 330
7 - Ankara-İzmir Otoyolu 535

MILLÎ BÜTÇEYLE YAPILMASI PLANLANAN PROJELER

13 - Yalova - İzmit Otoyolu 81
14 - Mersin-Sîlîflîke (Taşçucu) Otoyolu 98
15 - Çiğli-Âlâğa-Çandarlı Otoyolu 81

Yıl Otoyol Projeleri
MILLÎ BÜTÇEYLE YAPILMASI PLANLANAN PROJELER

5.290 KM 260 KM TOPLAM 5.550 KM
ONGOING PPP PROJECTS

İSTANBUL -İZMİR MOTORWAY ( INCLUDING İZMİT BAY CROSSING AND CONNECTING ROADS )
Investment Cost is 6.3 Billion US $

NORTHERN MARMARA MOTORWAY, ODAYERİ PAŞAKÖY SECTION ( INCLUDING 3. SUSPENSION BRIDGE ) PROJECT
Investment Cost is 2.5 Billion US $

SABUNCUBELİ TUNNEL PROJECT
Investment Cost is 55 Million US $
Two most developed regions of Turkey, namely Marmara and Aegean Regions.
About 60% of Turkey’s total GDP is produced by these two regions.

About 43% of Turkey’s population lives in Marmara and Aegean Regions.
High portion of overall passenger and freight transport in Turkey is taken place in this two regions.

Distribution of Passenger & Freight Transport 2012 (Million)

- **TON-KM**
  - MARMARA: 56,598
  - AEGEAN: 28,528
  - REST OF TURKEY: 130,998

- **PASSENGER-KM**
  - MARMARA: 76,259
  - AEGEAN: 40,337
  - REST OF TURKEY: 142,278

- **VEHICLE-KM**
  - MARMARA: 26,782
  - AEGEAN: 14,850
  - REST OF TURKEY: 52,358
İstanbul-İzmir Motorway is one of the biggest Build Operate Transfer (BOT) projects in the world which includes World 4th suspension bridge (İzmit Bay Bridge) with a longest central mid span 1550 m.

- Project consists of 2682 m suspension bridge, 377 km motorway + 44 km connecting roads,
- Total investment cost of the project is about 6.3 billion USD
- The BOT Contract was signed at 27.09.2010. According to contract, the contractor will build the project in 7 years, and operate the motorway for 15 years and 4 months.

- Length of the road between Gebze-İzmir will be shorten by 90 km. Travel time from Istanbul to İzmir will decrease from 8 hours to 4 hours.
<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Motorway Length</td>
<td>377 km</td>
</tr>
<tr>
<td>Connecting Road Length</td>
<td>44 km</td>
</tr>
<tr>
<td>Suspension Bridge Length</td>
<td>2,682 m</td>
</tr>
<tr>
<td>Mid Span</td>
<td>1,550 m</td>
</tr>
<tr>
<td>Approach Viaduct</td>
<td>1,378 m</td>
</tr>
<tr>
<td>Number of Viaducts</td>
<td>30</td>
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<tr>
<td>Total Viaduct Length</td>
<td>18,212 m</td>
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<tr>
<td>Number of Tunnels</td>
<td>2</td>
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<tr>
<td>Total Tunnel Length</td>
<td>5,142 m</td>
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<tr>
<td>Number of Bridges</td>
<td>199</td>
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<tr>
<td>Toll Plazas</td>
<td>20</td>
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<tr>
<td>Service Facilities</td>
<td>11</td>
</tr>
<tr>
<td>Parking Lots</td>
<td>7</td>
</tr>
<tr>
<td>Interchanges</td>
<td>25</td>
</tr>
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</table>
İSTANBUL -İZMİR MOTORWAY (421 Km)
CONSTRUCTION & LAUNCHING OF CAISSON FOUNDATIONS

Caisson Foundation Construction (video1)
Launching of Caisson Foundation (video2)
3rd Strait Suspension Bridge: 1875 meter long with a mid span 1408 m.

- 59 m platform width (2x4 lane highway and 2x1 lane railway) and 322 m tower height.
THE LONGEST SUSPENSION MOTORWAY BRIDGE WITH RAILWAY IN THE WORLD.

- Signed at 20.04.2012.
- Construction & Operation: 10 years 2 months 20 days.
- Construction period: 2 years and 6 months.
- Operation period: 7 years, 8 months and 20 days.
- Total Investment Amount: 2.5 billion $.
- Bridge Toll Price for car: 3 $.
- Motorway Toll Price for car: 0.08 $/km.
THANK YOU VERY MUCH
FOR YOUR ATTENTION

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