





# DEVELOPMENT of EURO-ASIAN TRANSPORT LINKS

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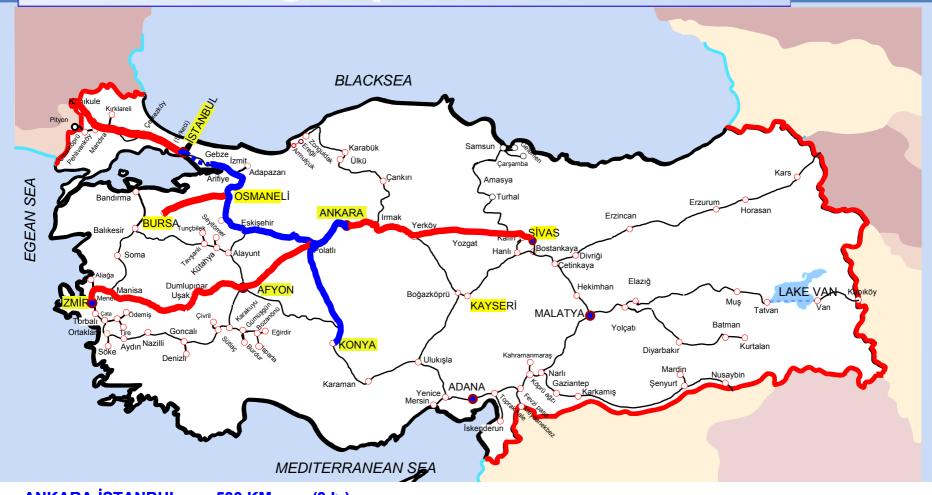
12-14 September 2007





# RAILWAY PROJECTS

# **High Speed Lines**



ANKARA-İSTANBUL 533 KM (3 h.) ANKARA-KONYA 212 KM (1 h. 15 min.)

ANKARA-SİVAS 466 KM (3 h.)

**ANKARA-İZMİR** 623 KM (3 h. 30 min.)

BURSA-OSMANELİ 106 KM (30 mln.) ISTANBUL- EDİRNE 230 KM (1 h. 20 min.)

(BORDER with BULGARIA)

: UNDER CONSTRUCTION

: FINAL DRAWINGS COMPLETED

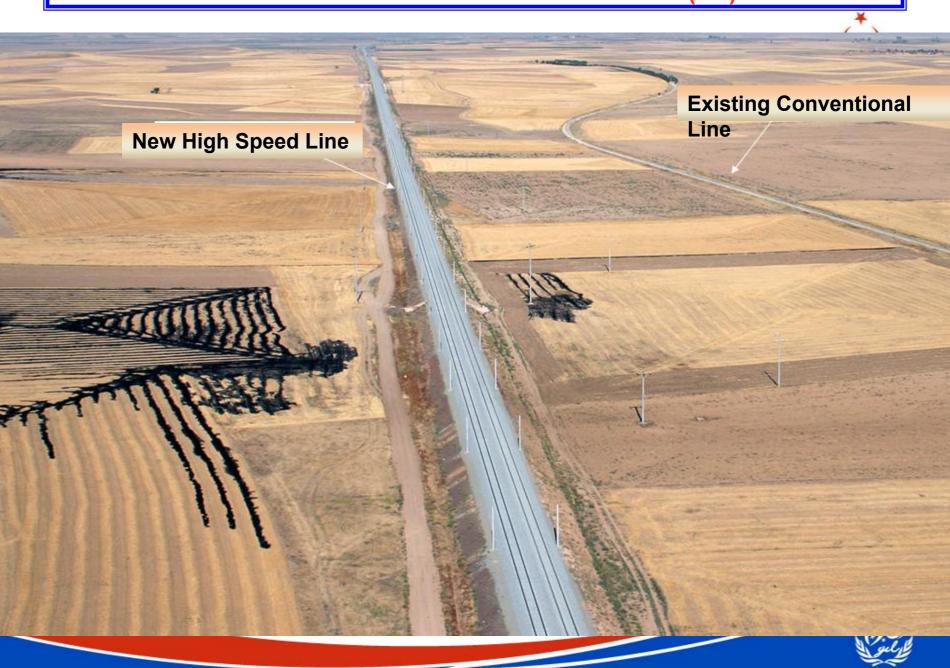
## ANKARA – ISTANBUL HIGH SPEED LINE (1/4)

Line Section	Length (km)	Cost (Million US \$)	Start – Finish	Explanations
Sincan - Esenkent	15	49,4	2006-2007	New Construction: %73 physical realization in infrastructure. Construction of super&infrastructure will be completed in 2007
Esenkent – Eskişehir	206	835,4	2003-2007	New Construction: %92 physical realization in super&infrastructure. Construction of super&infrastructure will be completed in 2007
Eskişehir – İnönü	30	46,1	2006-2007	New Construction: %22 physical realization in infrastructure. Construction of super&infrastructure will be completed in 2007
İnönü - Vezirhan	54	610	2006-2008	Contract for Construction was signed. Credit talks are ongoing by Treasury
Vezirhan - Köseköy	104	660	2006-2008	Contract for Construction was signed. Credit talks are ongoing by Treasury
Köseköy – Gebze	56	135,6	2006-2008	Final Drawings completed. Tendering to be done in 2007
Eskişehir Station Passage	-	81	2006-2008	Final Drawings completed. Tendering to be done in 2007
New Ankara Station	-	10	2006-2008	Final Drawings to be completed soon. Tendering to be made in 2007
Gebze – Haydarpaşa	44			Within Marmaray Project
Ankara - Sincan	24			
Total	465 km	2.427,5 Million \$	Ankara - İstanbul: 3 hours	
Operational Speed	250	) kph	Ankara - Eskişehir : 1 hours	

#### **ANKARA - ISTANBUL HIGH SPEED LINE (2/4)**



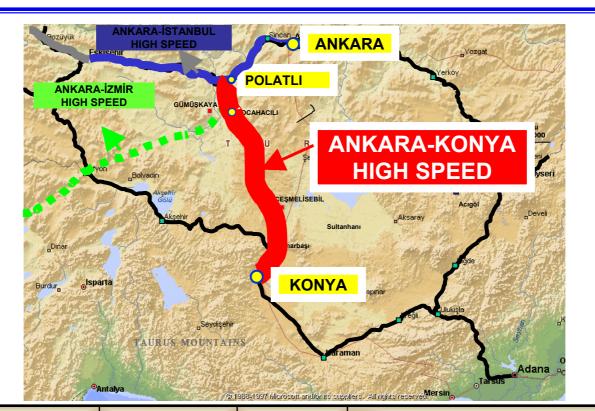
#### ANKARA – ISTANBUL HIGH SPEED LINE (3/4)



## ANKARA – ISTANBUL HIGH SPEED LINE (4/4)



#### **ANKARA – KONYA HIGH SPEED LINE**





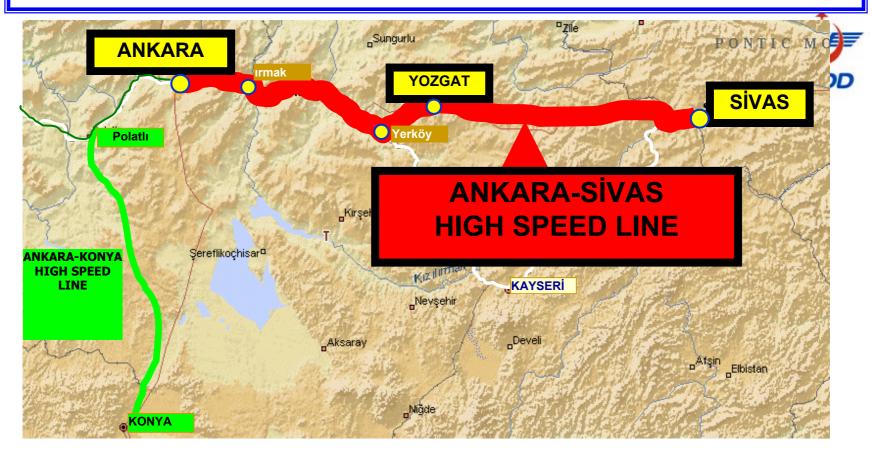
Line Section	(km)	(Million US \$)	Start - Finish	Explanations
1.Phase Infrastructure (Polatlı – Örnekköy)	100	95	2005-2007	New Construction: %14 physical realization in infrastructure Construction of super&infra structure will be completed in 2008
2.Phase Infrastructure (Örnekköy - Konya)	112		2005-2007	New Construction: %72 physical realization in infrastructure Construction of super&infra structure will be completed in 2008
Superstructure	212	280	2007-2008	Tendered on 01 August 2007 and be completed in 2008
Total	212 km	375 Million \$	Ankara - Konya: 1 h. 15 m.	

Konya - İstanbul: 3 h 45 m.

**Operational Speed** 

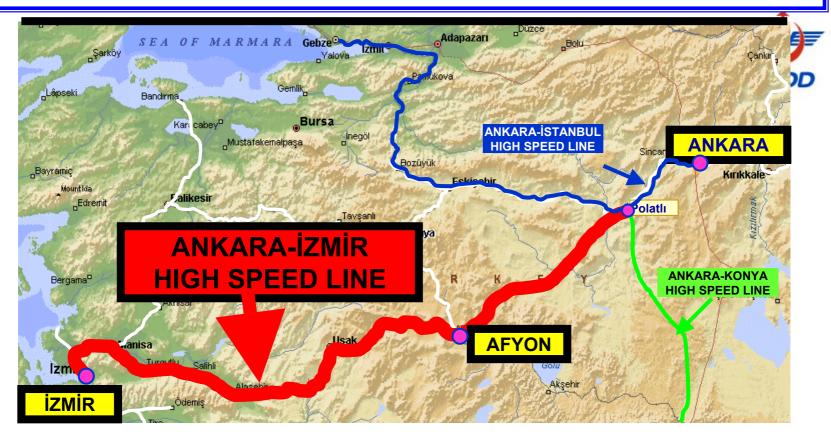
250 kph

#### **ANKARA – SIVAS HIGH SPEED LINE**



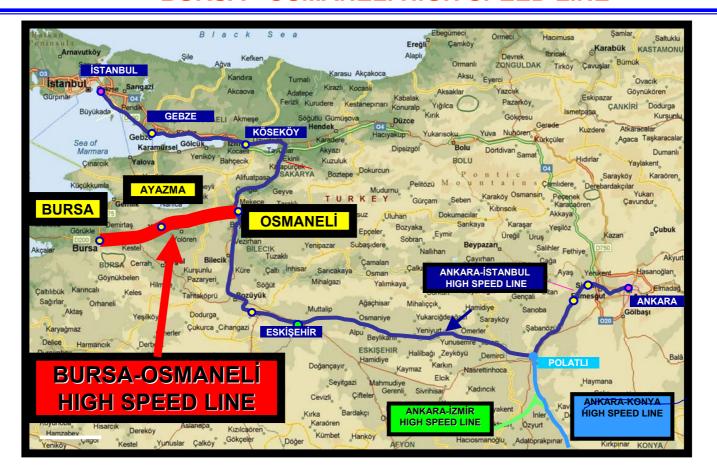
Total	471 Km	Start - Finish	2007 - 2011
Ankara-Sivas	2 Hours	Sivas - İstanbul	5 Hours
Cost	1.300 Million \$	Operational Speed	250 kph

#### **ANKARA – IZMIR HIGH SPEED LINE**



Total	606 Km	Start	2007
Ankara-Izmir	3 hours 20 m.	Finish	2011
Cost	1.850 Million \$	Operational Speed	250 kph

#### **BURSA - OSMANELI HIGH SPEED LINE**





#### Expropriations to be completed by DLH and then Project be merged into TCDD Investment

Program	105,5 Km	Ankara - Bursa	2 hours 15 m.
Start - Finish	2006 - 2008	Bursa – Istanbul	1 hours 30 m.
Cost	250 Million \$	Operational Speed	250 kph

#### **KARS - TBILISI - BAKU PROJECT**

Europe is to be connected to Caucasia and Middle-Asia through Turkiye



- Main Railway Corridor in east-west direction to be established
- > Expropriation decision by Board of Ministers on 26.02.2007
- Cost: 420 Million \$
- Length: 76 km (Turkiye) 29 km (Georgia)
- Number of Lines: Infrastructure (Double) Superstructure (Single Line– Electrfified Signaled)
- New construction between Kars and Ahilkelek along with upgrading of Ahilkelek-Tbilisi existing line section.



#### **ISTANBUL (HALKALI) – EDİRNE (KAPIKULE) HIGH SPEED LINE PROJECT**

Continuation of Ankara – Istanbul High Speed Line

TCDD

- Operational Speed: 250 kph
- Double Line with signaling and electrification
- Final Drawings to be completed soon
- Cost: 545 Million \$ Length: 230 km





#### **TEKİRDAĞ – MURATLI PROJECT**

Total Length: 31 km



- (Double Line with signaling and electrification)
- To shift freight transportation from Istanbul Strait to Bandirma via ferry due to Closure of existing line section around Istanbul for Marmaray Project

Bandirma – Tekirdağ Ferry Transport will shorten transport length of goods produced in Aegean Region with a length of 600 km.





#### SIVAS - ERZINCAN - KARS HIGH SPEED LINE PROJECT

- ➤ In order to contribute to the railway transport between Europerand Caucasia-Middle Asia through Turkiye
- ➤ 3 Phases consisting of Sivas- Erzincan, Erzincan-Erzurum and Erzurum-Kars
- Double Line with signaling and electrification
- Operational Speed: 250 kph



#### **MARMARAY PROJECT**

**➤One of the biggest transport projects in the world.** 



- ➤ Connection of European and Asian Parts of Istanbul via uninterruptedcontemporary-high capacity railway line
- **≻**Consisting of 3 Phases:
  - i. Immersed Tube Tunnel along with approaching tunnels and 3 underground stations (BC1)
  - ii. Construction of new triple line for ground-level line section, connecting Tunnel Section to high speed railway lines (Istanbul-Ankara and Istanbul-Edirne High Speed Lines) (CR1)
  - iii. Procurement of railway Rolling-stocks (CR2)



# PHYSICAL IMPEDIMENTS to SMOOTH FLOW of TRAFFIC (2/3)

**MARMARAY PROJECT** 



European Part: 19.6 km

Total Length: 76.7 km

Asian Part: 43.4 km



#### **ESTABLISHMENT of LOGISTIC VILLAGES**

Planned to be established at highly demanded locations by customers, close to Organized Industrial Regions along with developed road connections

-In order to

omeet freight logistic needs with high freight potential

odevelop combined transport in

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Turkiyegistic Villages under construction				
Halkalı (İstanbul)	Köseköy (İzmit)			
Gelemen (Samsun)	Hasanbey (Eskişehir)			
Boğazköprü (Kayseri)	Gökköy (Balıkesir)			
Logistic Villages Final Drawings Completed				
Palandoken (Erzurum)	Usak			
Yenice (Mersin)	(50)			

#### **PROCUREMENT of 2 NEW FERRIES**

To be operated between Tatvan - Van;



2 Ferries with a capacity of 50 wagons along with repairing of landing piers and construction of warehouse for ferries

Project/Design Works were completed in May 2007.

To be tendered in the following days, Total Estimated Cost: 77 Million\$ (%100 Credit)







# MAINTENANCE & RENEWAL WORKS

## **Permanent Way Renewals**



#### Totally; 500 km-Track Renewal

▶Boğazköprü-Ulukışla-Yenice : 15 km

➤ Narlı-Karkamış-Nusaybin :120 km

► Ankara-Kayseri : 60 km

➤ Kayseri-Sivas : 50 km

≻Halkalı-Border : 60 km

➤ Cumaovası-Aydın-Denizli : 80 km

➤ Yolçatı-Tatvan : 38 km

► Eskişehir-Balıkesir : 77 km

# Totally; 54 km- Takviye Pozu

➤ Karkamış-Çobanbey : 30 km

**≻**Çatal-Tire : 11 km

➤ Bozanönü-Isparta : 13 km

Totally; 16.000 Rail Weldings

**Totally; 200 Switch Renewals** 

Planned for 2007



# Rolling Stocks (1/3)









**CEVHER VAGONU** 

**TANK VAGON** 



**TVS 2000 PULMAN VAGON** 





COMMUTER SET

Rolling	<b>Stocks</b>	Ages	<b>Distribution</b>	as	<b>"" 0/0 "</b>
0		0			

	Locomotives			Wagons		
Age Groups	Diesel Electric (481)	Electric Locos (68)	Commuter Sets (84)	Passenger Coaches (993)	Freight Wagons (16.320)	
0-9	9	0	0	23	17	
10-19.	14	65	0	31	29	
>=20	77	35	100	46	54	

# Rolling Stocks (2/3)

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NEW 89 DIESEL ELECTRIC LOCOs			
Cost	323.114.000 YTL		
Procurement Date	2003: 6 Locos 2004: 12 Locos 2005: 24 Locos 2006: 24 Prp.for Locos 2007: 47 Locos		
Manufacturer	EMD-GM/TÜLOMSAŞ		
Max. Speed/Power	120 kph/3300 HP at 904 rpm		
NEW 80 ELEC	TRIC LOCOs		
Cost	395.000.000 YTL		
Tendered on 18 April 2007	Tender Proposals under Evaluation		
Technical Characteristics Power: Max. Speed:	Min. 5000 KW Max. 140 kph		







Double Bogey, IGBT controlled 3 Phase asynchronous Traction, AC/AC Traction 25 KV AC/50 Hz, Computer Controlled

# Rolling Stocks (3/3)







1.338 FREIGHT WAGONS and 127 PASSENGER COACHES manufactured at TULOMSAS, TUDEMSAS, TUVASAS since 2003



LEVEL CROSSINGS are equipped with AUTOMATIC CONTROLLED BARRIERS



# THANK YOU FOR YOUR ATTENTION



TCDD

