

XXIV FIG International Congress 2010
Facing the Challenges – Building the Capacity
Sydney Convention & Exhibition Centre
11–16 April 2010



FIG SYDNEY 2010

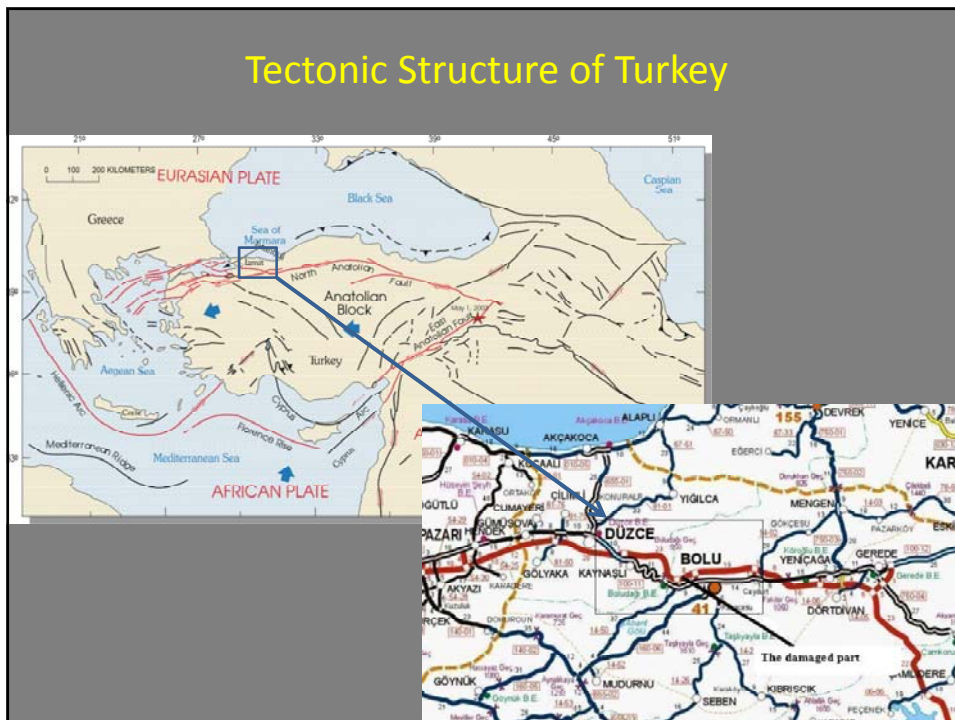
Determination of Structural Deformations Caused by Earthquakes Using Geodetic Techniques



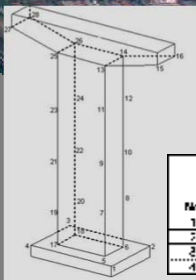
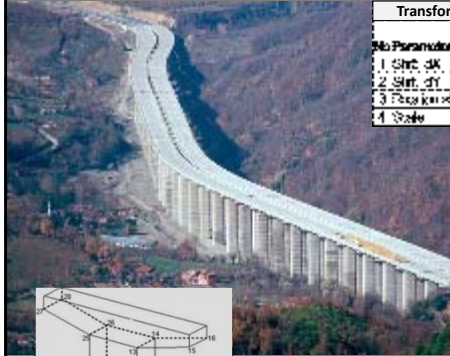
Esra TEKDAL EMNİYETİ, Rahmi Nurhan ÇELİK, Tevfik AYAN

FS 1D – Deformation Measurements for Engineering Structures
FIG Congress 2010
Facing the Challenges – Building the Capacity
Sydney, Australia, 11-16 April 2010

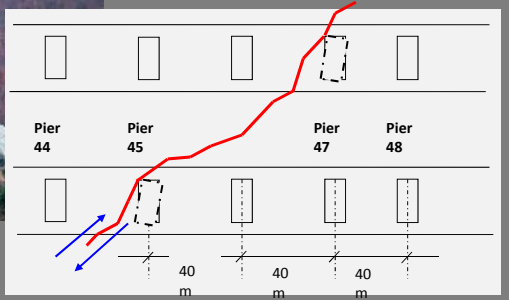
Tectonic Structure of Turkey



Bolu Pass of Istanbul-Ankara Motorway (TEM)



Transformation from Bolu to Düzce				Transformation from Düzce to Bolu				
No	Parameter	Value	Units	No	Parameter	Value	Units	
1	Start dx	30.213	0.0028	m	1	Start dx	30.013	0.0152
2	Start dy	193.452	0.0028	m	2	Start dy	193.805	0.0152
3	Position along Z	-18.342	1.9000	m	3	Position along Z	-25.228	1.9660
4	Scale	101.435	8.2122	[unit]	4	Scale	-41.215	8.2172



Transformation Parameters from Bolu to Düzce Pier 17 to 48				Transformation Parameters from Düzce to Bolu Pier 1 to 31				
No	Parameter	Value	Units	No	Parameter	Value	Units	
1	Start dx	-25.452	0.0015	m	1	Start dx	83.825	0.0007
2	Start dy	118.078	0.0015	m	2	Start dy	118.018	0.0007
3	Position along Z	25.721	0.0015	m	3	Position along Z	-4.025	0.0007
4	Scale	-88.411	-1.0780	[unit]	4	Scale	-41.215	8.2172