

# Contesto

esteso



- Il sistema dei Corridoi Multimodali Europei e in particolare il corridoio V Est-Ovest nel suo tratto pedemontano e la sua interferenza con il sistema Nord-Sud.
- Il processo oggi in corso di riconfigurazione della geografia europea delle **centralità**.
- Il fenomeno della **dispersione insediativa** che affligge ampie parti dell'Europa.
- L'ormai prossima **congestione** del sistema della mobilità europea.

# Contesto

esteso



## Issues

**The growing conflict facing transport:**




Increasing demand for mobility

- Worsening congestion
- Poor quality services
- Damage to the environment
- Safety being challenged
- Isolation of some regions

**Economic importance of the sector:**



- Total expenditure around €1000 billion in the Union
- Generates over 10% of Union GDP
- Employs over 10 million people



## Congestion

**Apoplexy at the centre, paralysis at the extremities**

**Congestion affects:**

- urban areas
- the trans-European network, including:

- 10% of the road network: 7 600 km
- 20% of the rail network: 16 000 km
- 30% of flights at major airports are more than 15 minutes late

**Consequences**

- risk of losing competitiveness
- costs (road): 0.5% GDP, 1% by 2010

**The effect of imbalance between modes**

Mode	Goods	Passengers
Road	44%	79%
Sea	41%	6%
Rail	8%	6%
Inland waterways	4%	5%



## Roads

**The explosion in road traffic**

The roads carry 44% of freight and 79% of passenger transport.  
Each day 10 hectares are covered over by road infrastructure.  
The car fleet is expanding by 3 million vehicles a year in the Union.

**Consequences**



- Saturation** of industrialised urban regions (Ruhr, Randstad, northern Italy, southern England). One tenth of the trans-European network is congested.
- Pollution:** road transport accounts for 84% of all CO<sub>2</sub> emissions from transport.
- Unsafe roads**



## Integrating transport into sustainable development

**Why?**

- Air quality and climate change**  
Transport consumes energy; 28% of emissions of CO<sub>2</sub>, the main greenhouse gas.  
If nothing is done: CO<sub>2</sub> emissions up 50% between 1990 and 2010  
84% of transport emissions generated by road transport.
- Security of supply**  
Transport is 98% dependent on oil, 70% of which is imported.
- Tackling noise pollution**

**How?**

The Gothenburg European Council placed **breaking the link between economic growth and transport growth** at the heart of the sustainable development strategy.

# Contesto

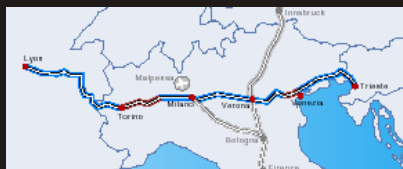
esteso





# Contesto

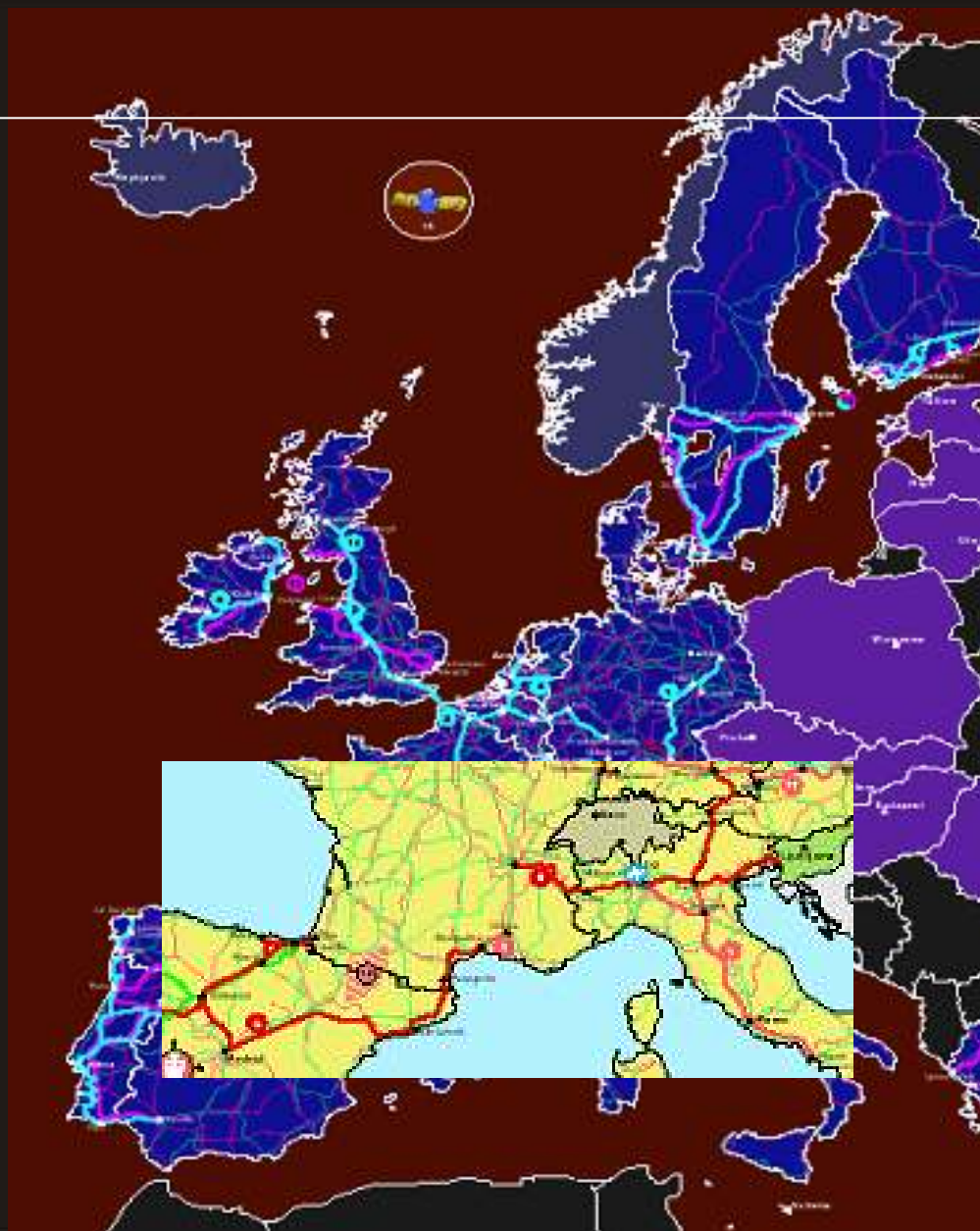
Quadro intermedio



EST-WEST V EUROPEAN CORRIDOR

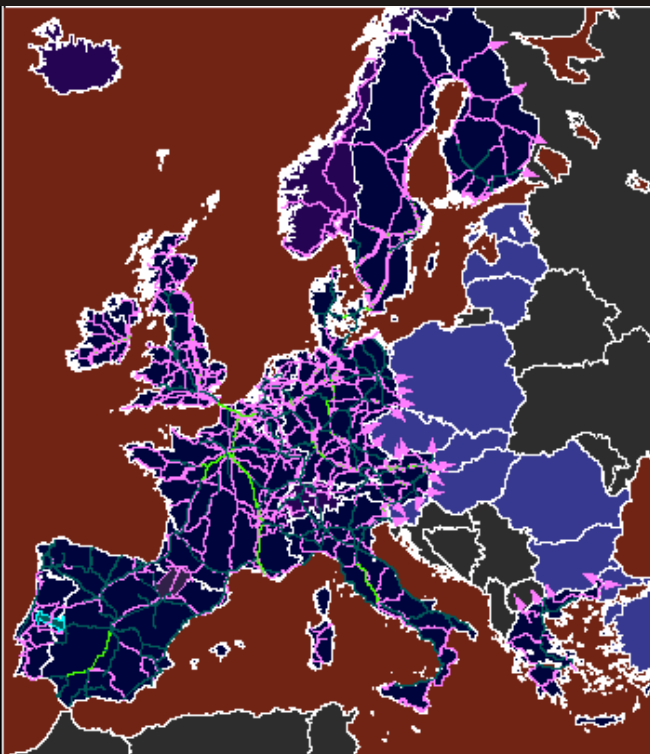


NORTH-SUD EUROPEAN CORRIDOR

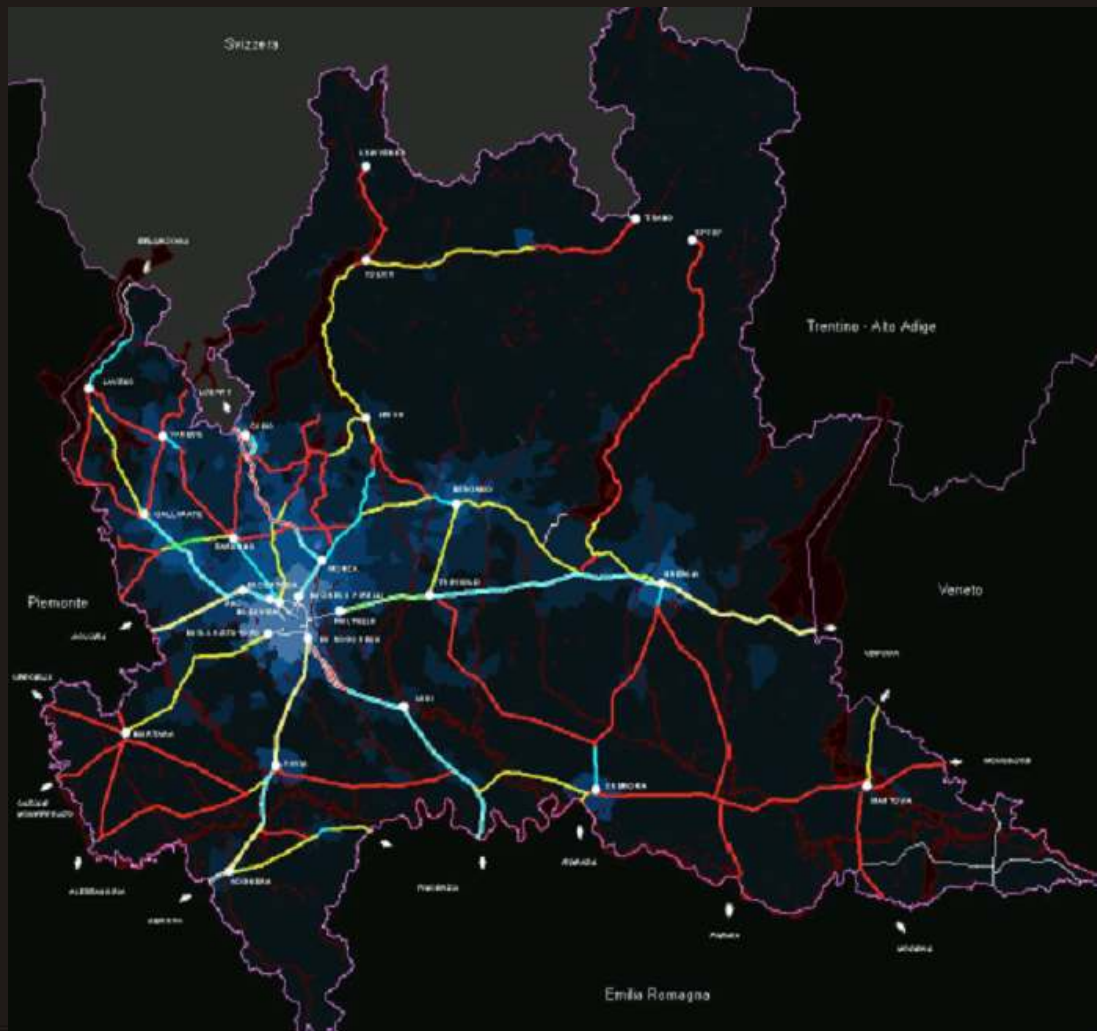


# Contesto della ricerca

Quadro intermedio



IL SISTEMA FERROVIARIO LOMBARDO  
NELLA RETE EUROPEA



POLITECNICO DI MILANO

Lecco, 15 settembre 2004.

Strategie globali e trasformazioni locali; Nuove scale di relazione nella rete Trans-europea

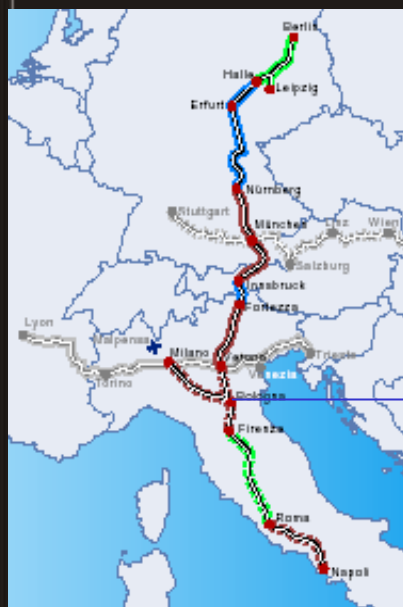


# Contesto della ricerca

Quadro intermedio



CORRIDOIO EST-OVEST



CORRIDOIO NORD-SUD



UR1A  
POLITECNICO DI MILANO

Strategie globali e trasformazioni locali; Nuove scale di relazione nella rete Trans-europea

Lecco, 15 settembre 2004.

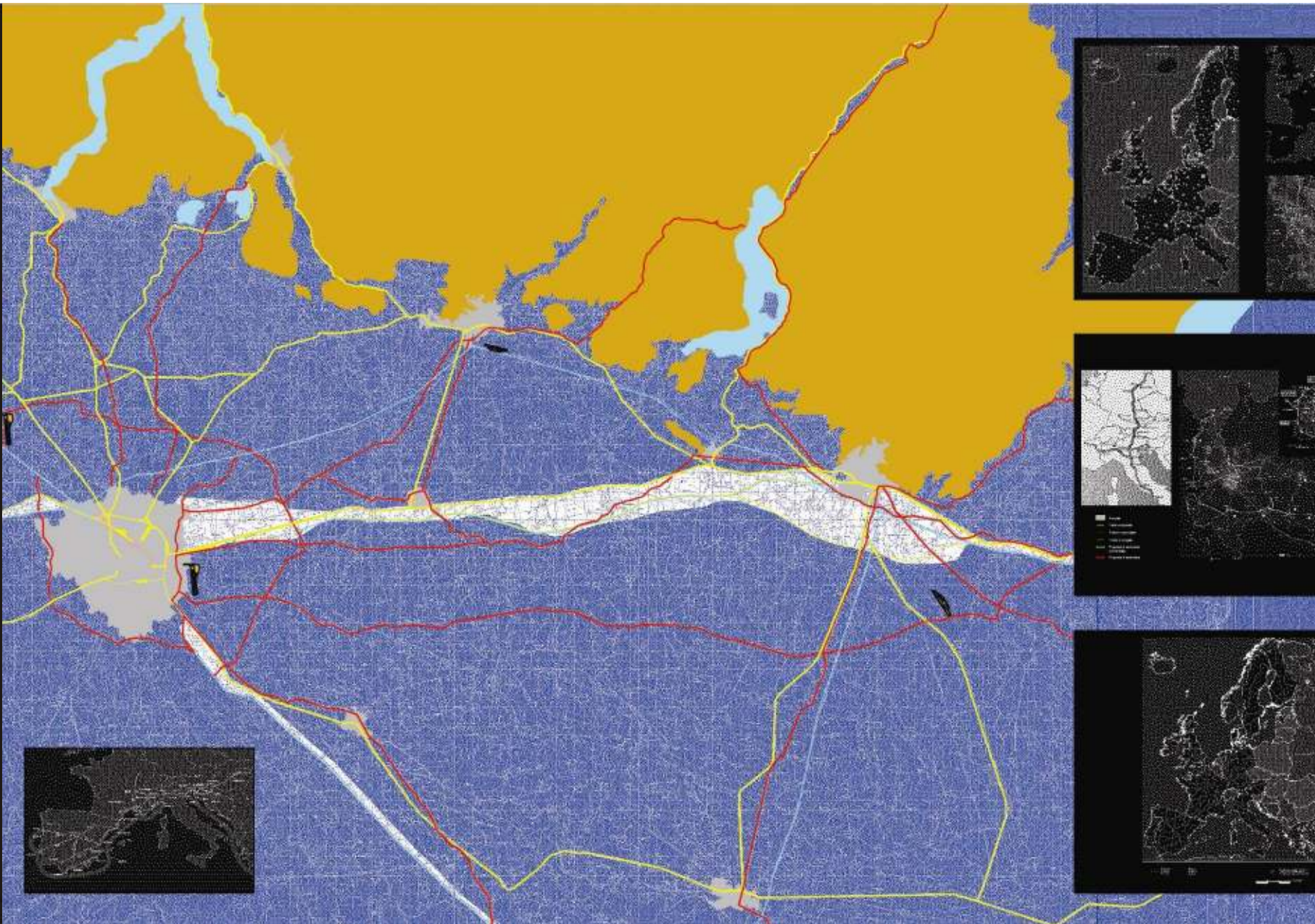
# NODI INFRASTRUTTURALI LUNGO IL TRACCIATO PEDEMONTANO

*Architettura delle connessioni nella rete Trans-europea: progetti applicati a nodi di interferenza locale*

*Nodo di Brescia*

Strategie globali e trasformazioni locali; Nuove scale di relazione nella rete Trans-europea



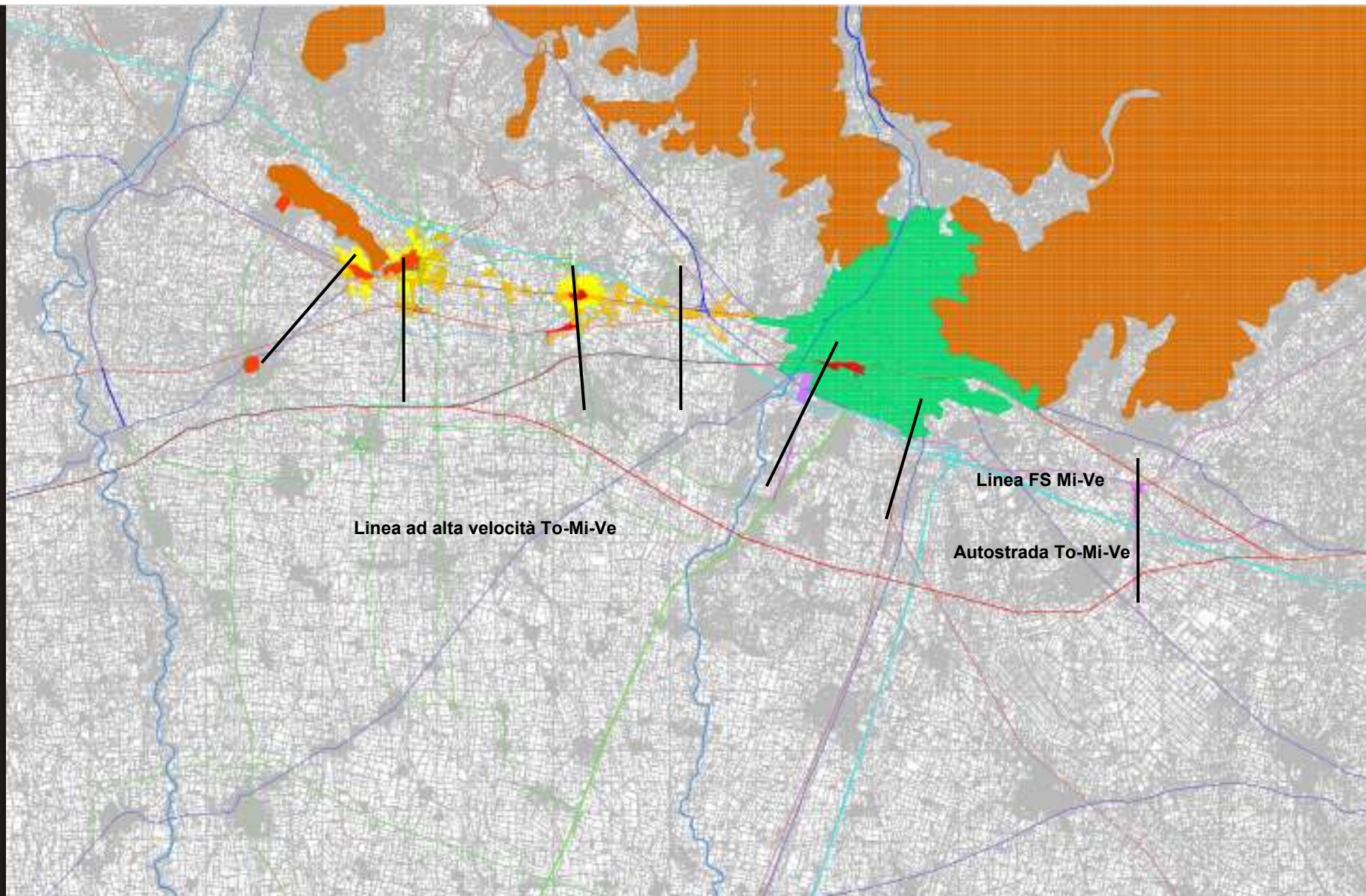


POLITECNICO DI MILANO

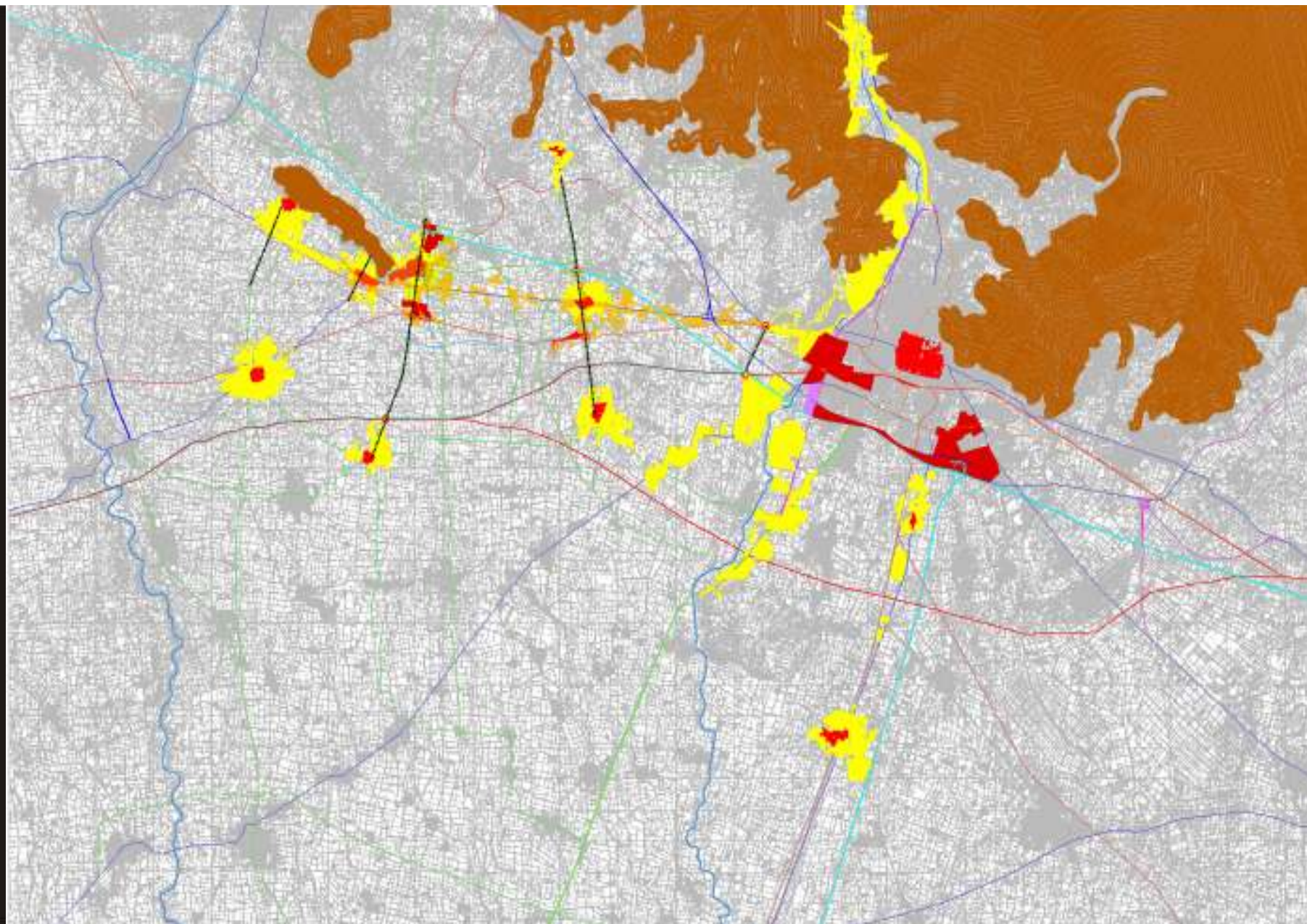
Lecco, 15 settembre 2004.

Strategie globali e trasformazioni locali; Nuove scale di relazione nella rete Trans-europea



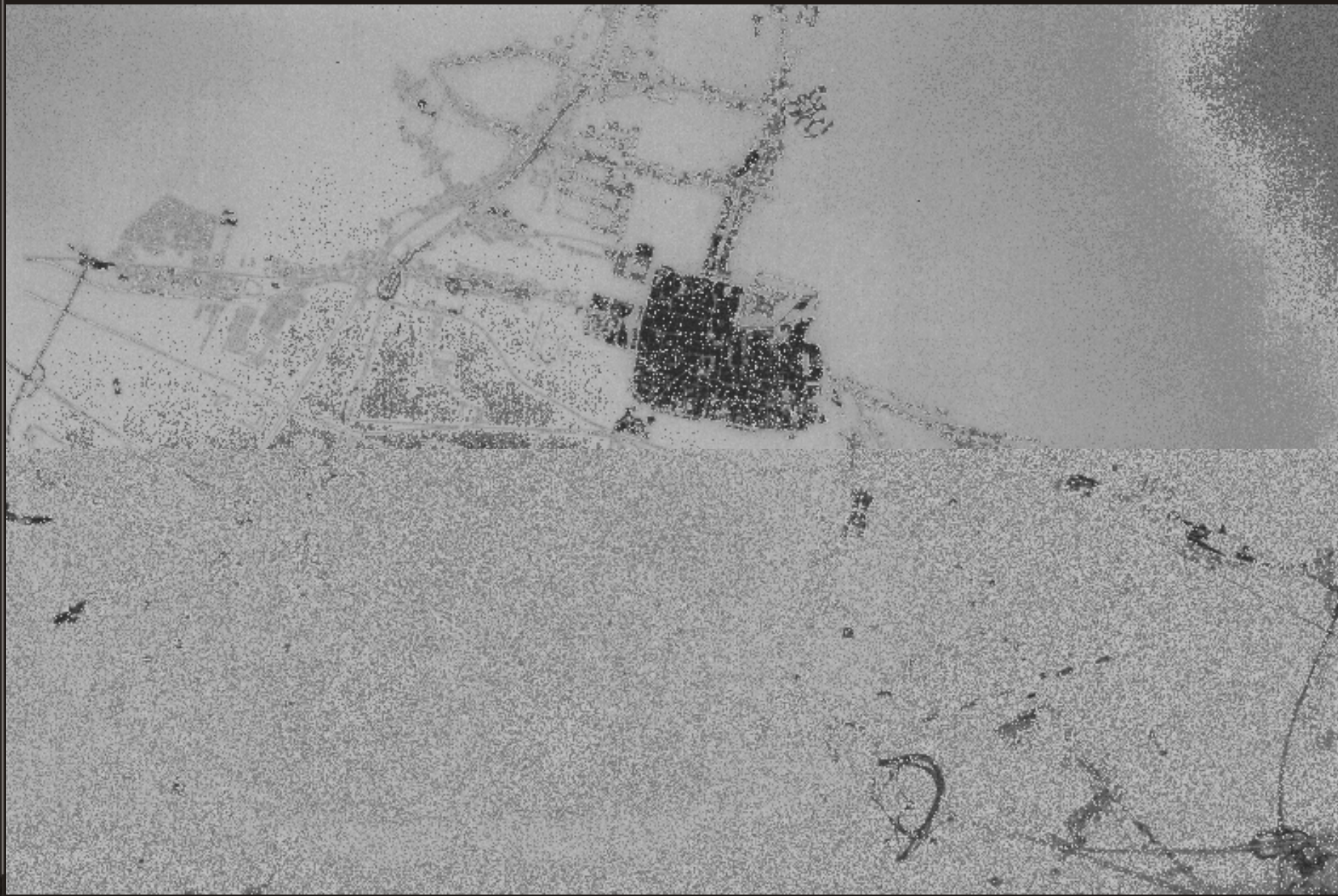










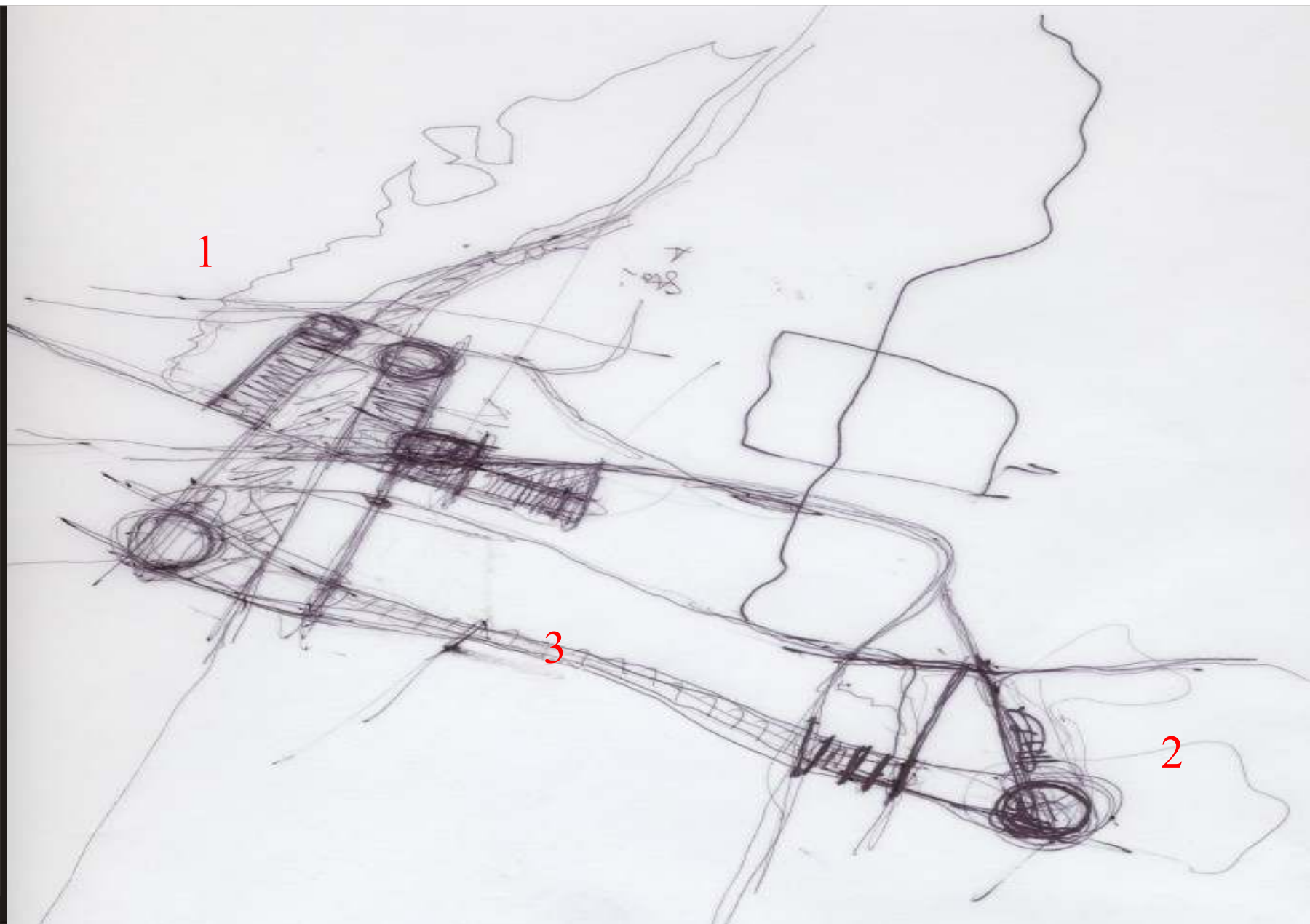


POLITECNICO DI MILANO

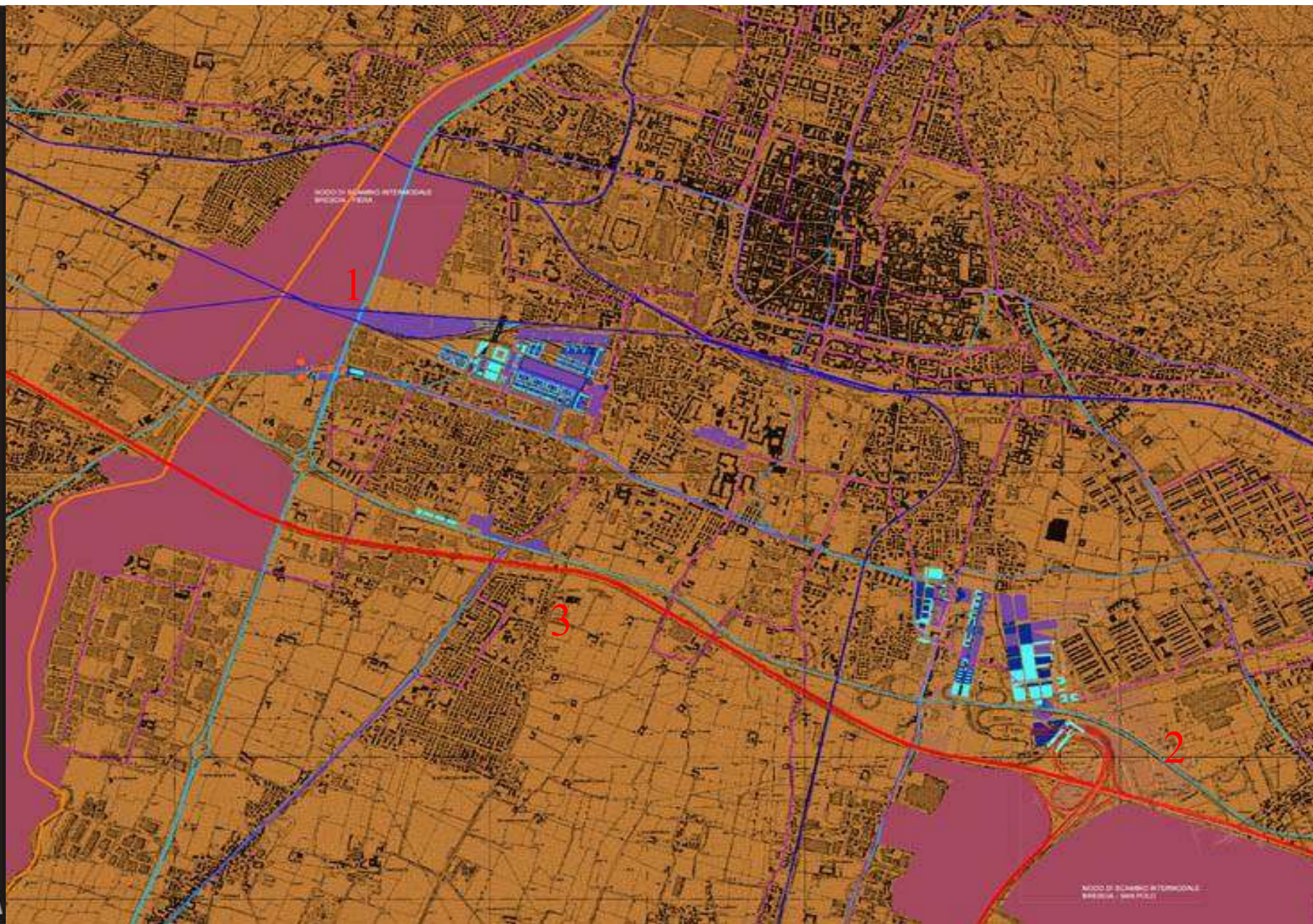
Lecco, 15 settembre 2004.

Strategie globali e trasformazioni locali; Nuove scale di relazione nella rete Trans-europea





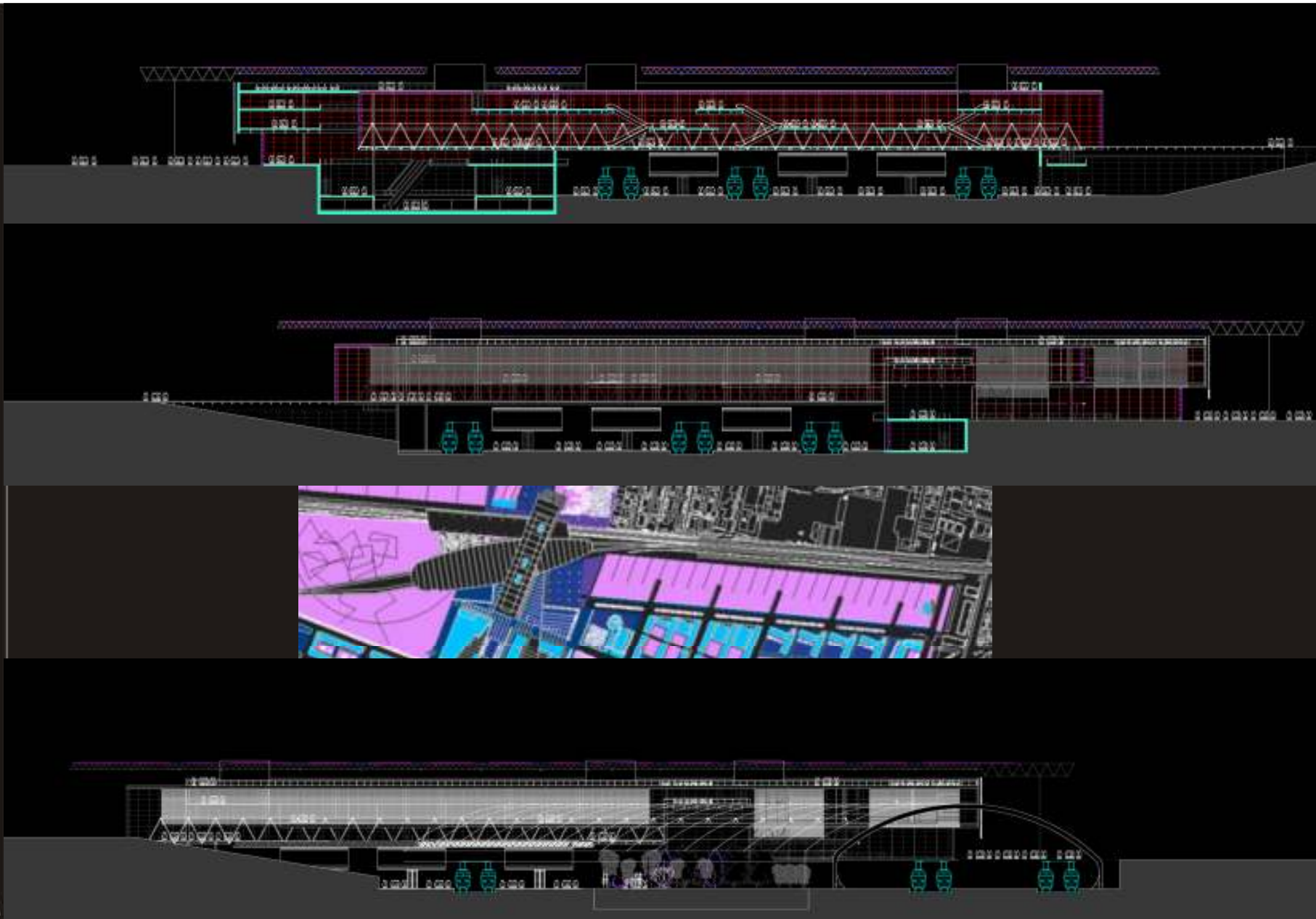




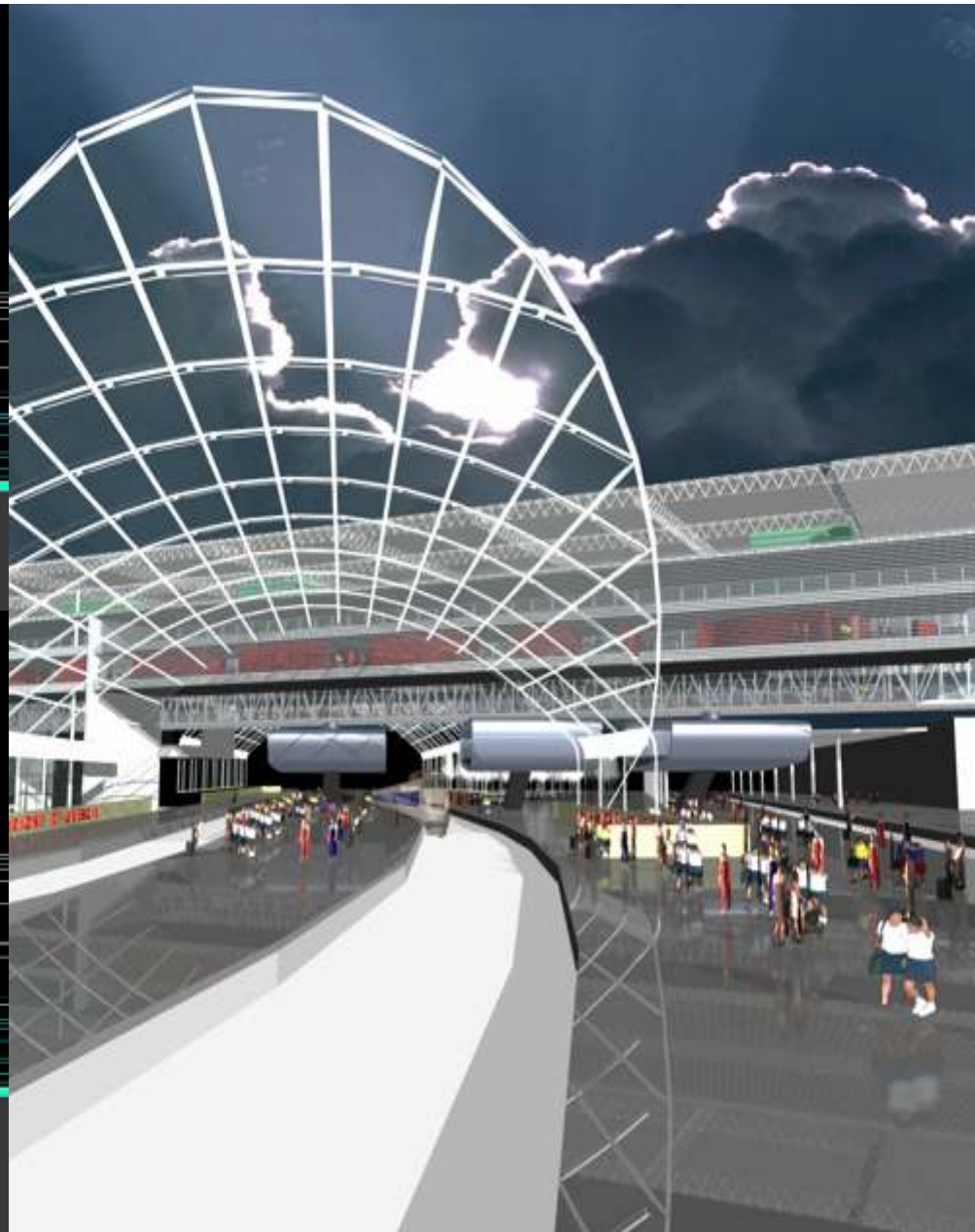
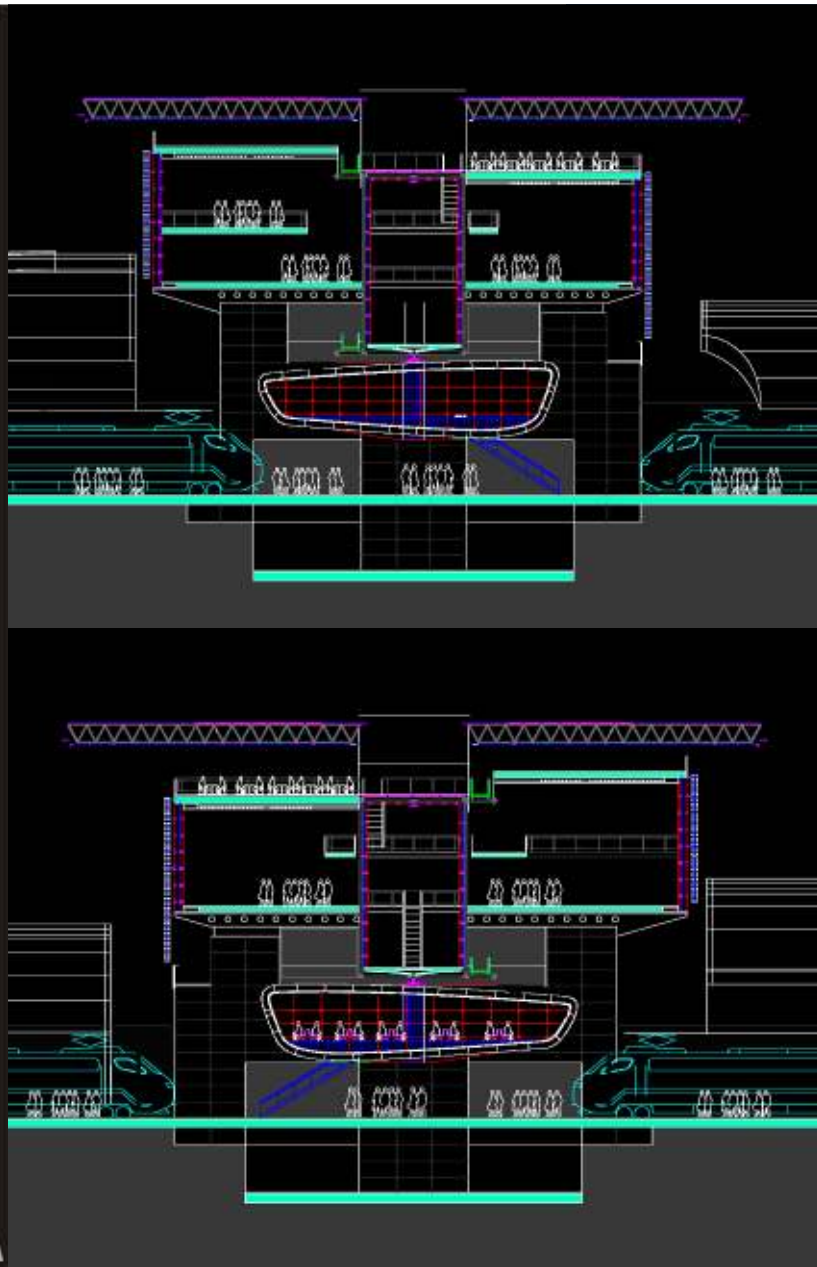


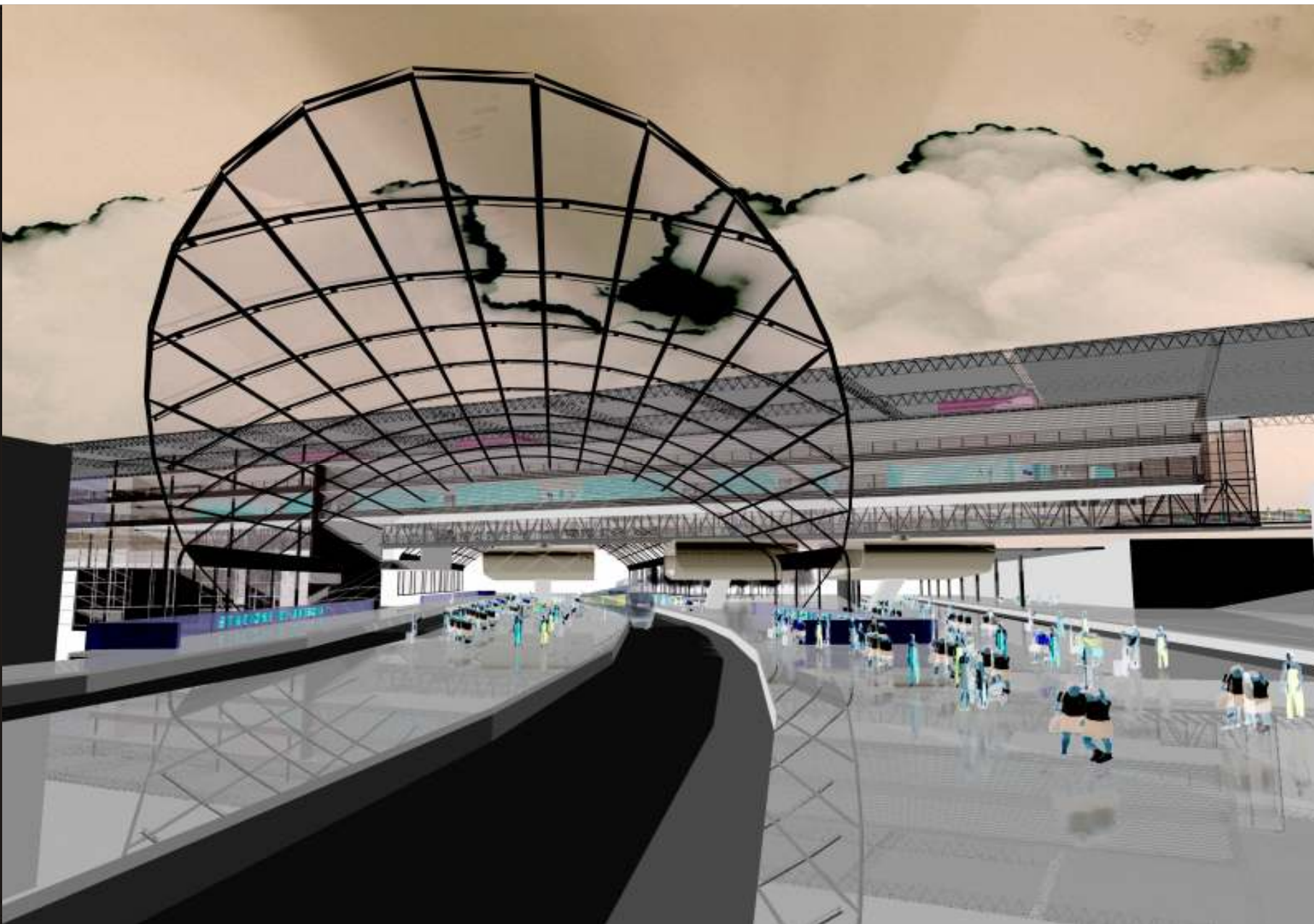




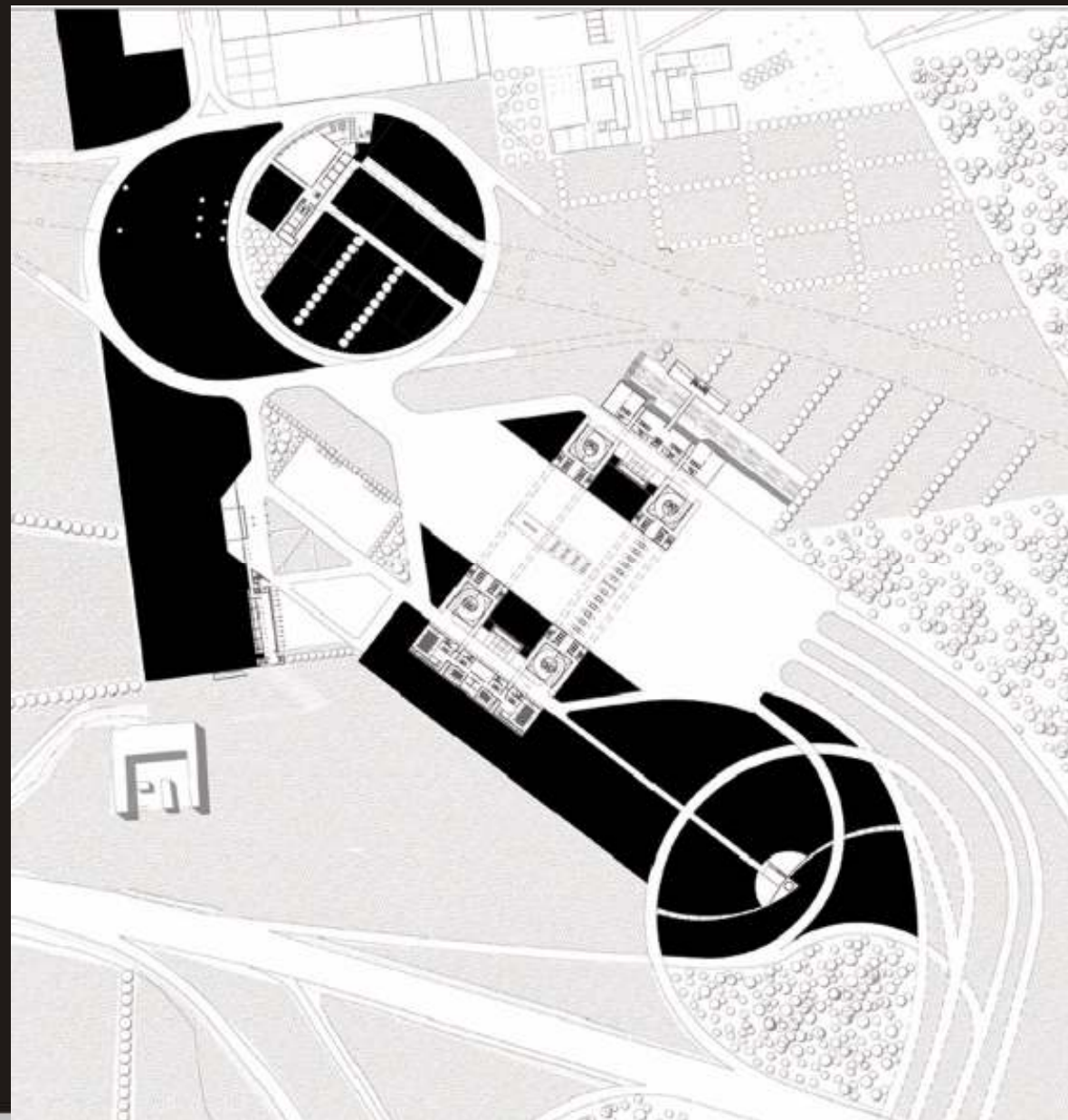
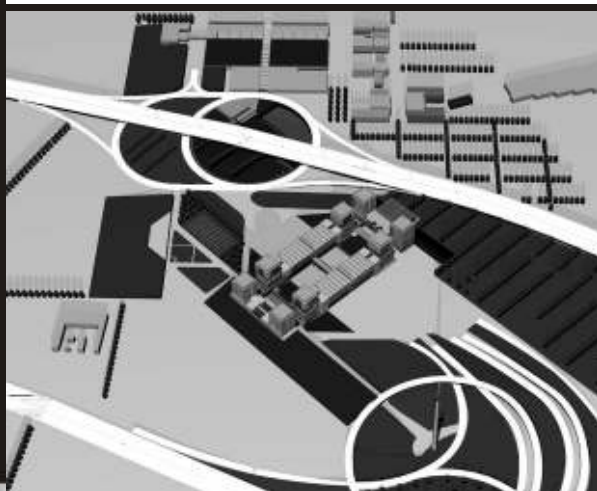
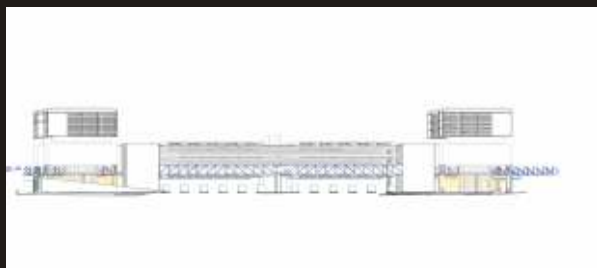






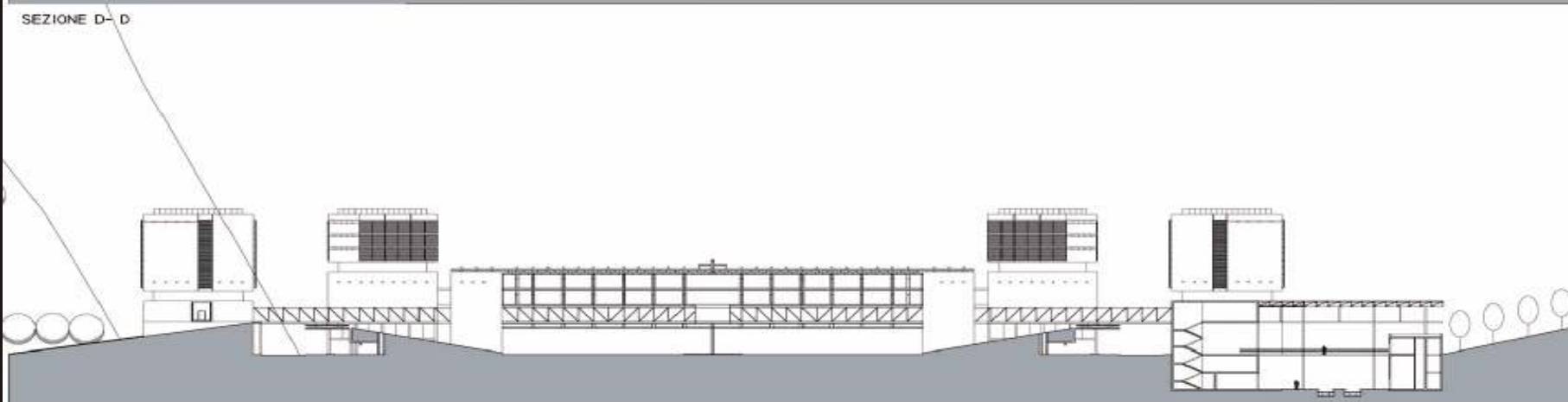




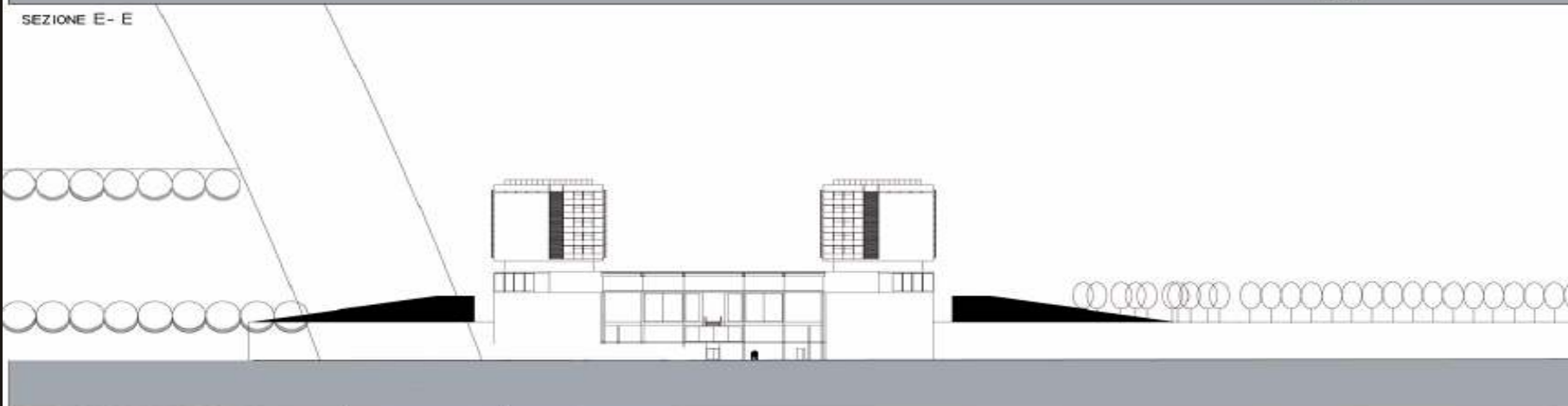




SEZIONE D-D



SEZIONE E-E



SEZIONE F-F