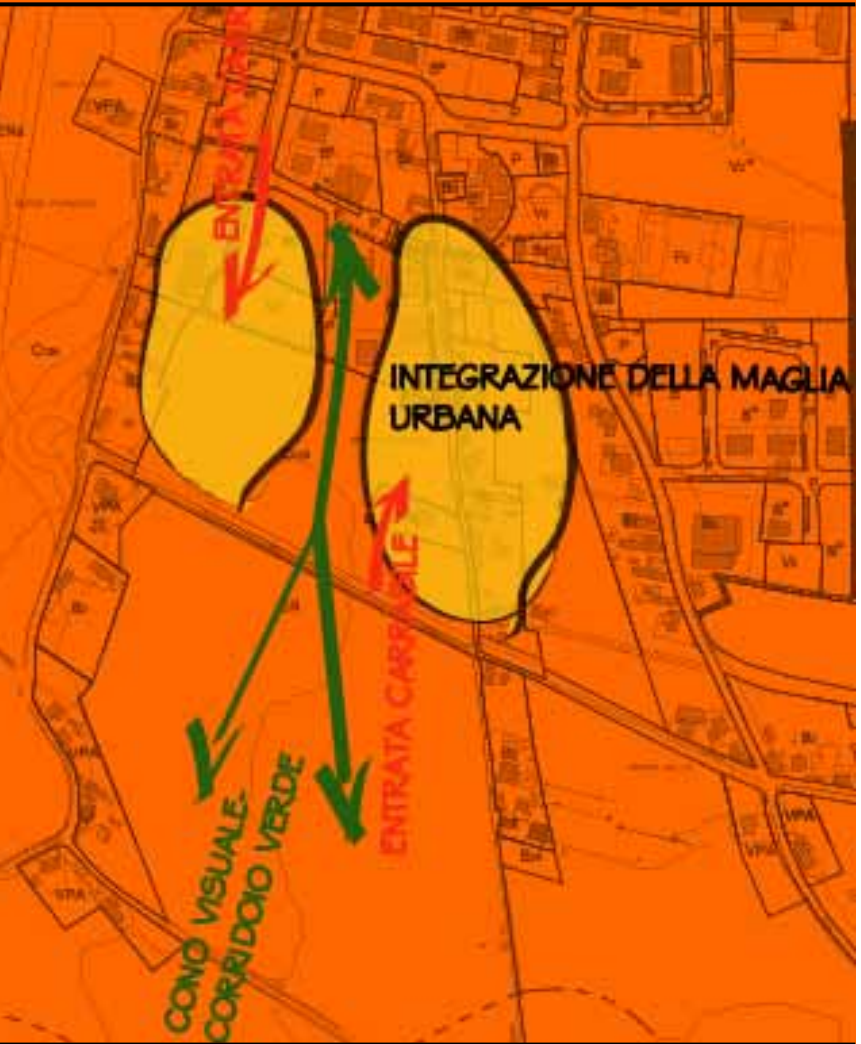


strategies for a sustainable urban planning



Francesca Sorricaro architect

sustainability make sense
if it is perceived as
widespread planning

EXAMINATION PAPERS OF THE DETAILED PLAN REQUESTED FROM THE REGULATIONS

Territorial framing, cadastral, aereofotogrammetric, General Town-planning

Altimetry survey plan

Planimetry of the volumes

Project of the ground

Technological net:

- Hydric study
- Electric energy
- Waste water
- Gas metan
- Telecommunications
- Public illumination
- Ecological "islands"

Study of acustic climate

Technical geological study

Dominant winds

Solar Mask 1. Shadows of buildings on the 21st of June

Solar Mask 2. Shadows of buildings on the 21st of Dicember

Shadows of vegetation

Mobility

Vegetation

Gas Radon report

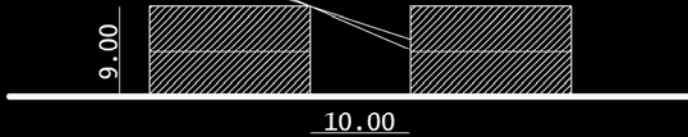
Luminosity pollution report

Electromagnetic field report

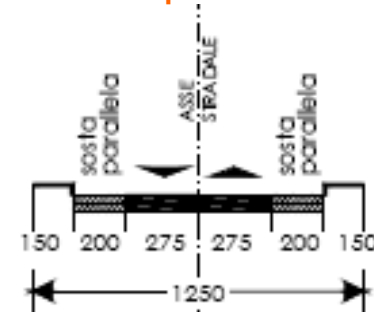
minimum distance between buildings requested from the regulations



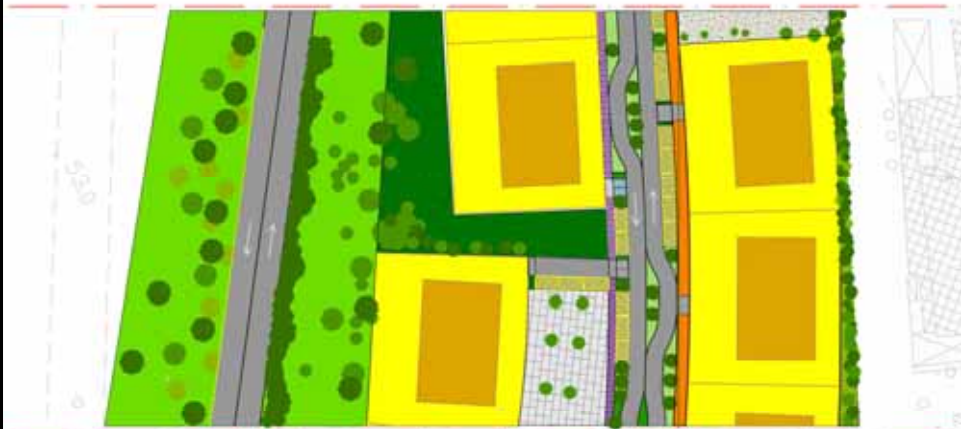
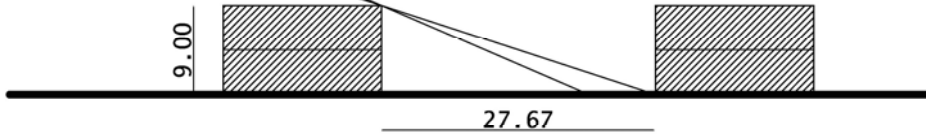
21 dicembre, ore: 12.00
21 dicembre, ore: 14.00



standard road section requested from the regulations



21 dicembre, ore: 12.00
21 dicembre, ore: 14.00

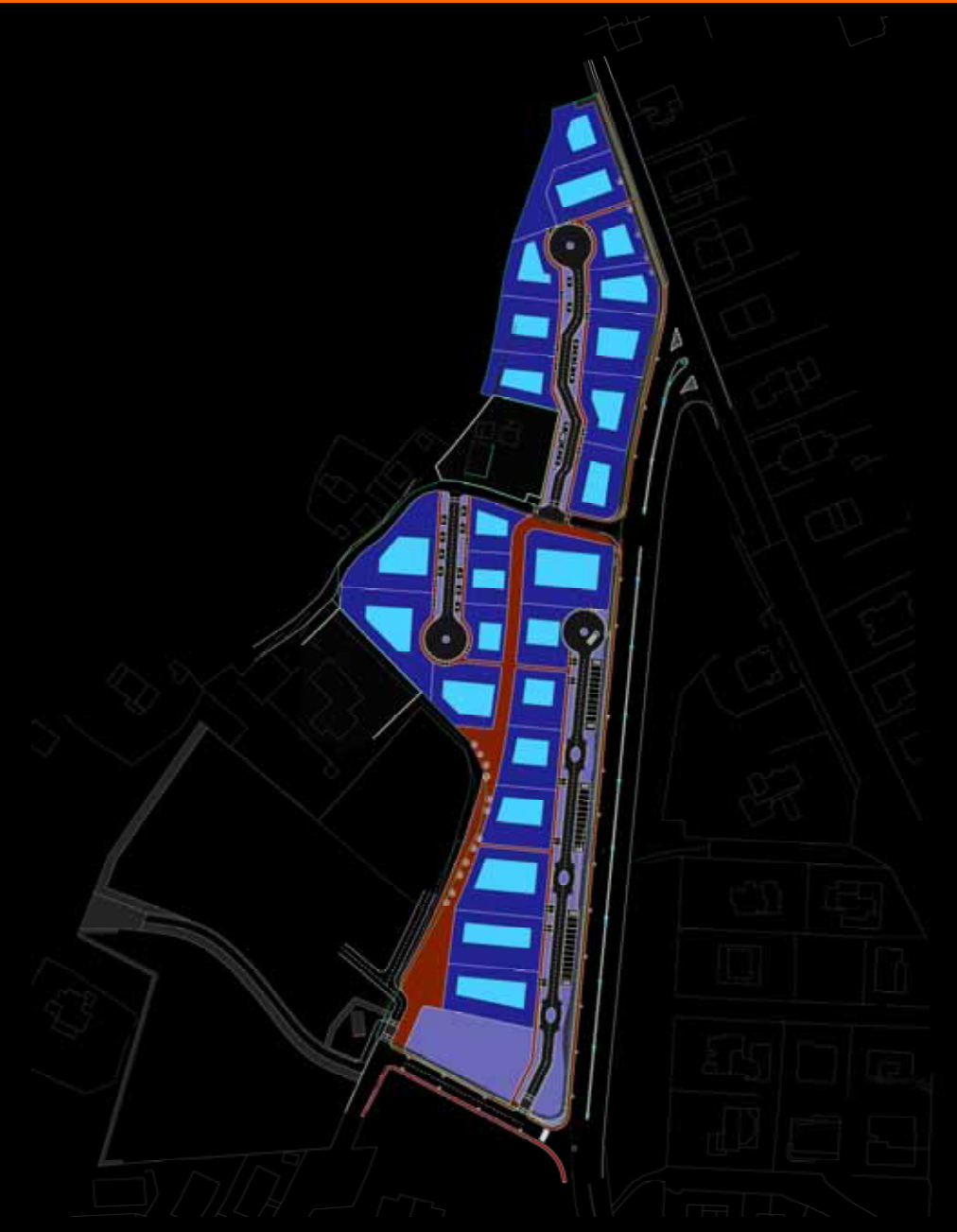


planning with principles of
sustainability means
to adopt a new way
of designing the city
and the buildings

the urbanistic parameters and the quantitative data of the traditional urban design are respected as well



project: PPE Appennini Alta, Jesi



**new analyses and
new indicators**
are added to the
traditional planning
and are combined with it

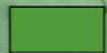


project: Urban area, Monte San Vito

LEGENDA



BORDO COMPARTO

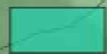


VERDE PUBBLICO ATTREZZATO:

- a. possibilità di collegamento tramite il percorso ciclopedonale
- b. possibilità di integrazione con il verde del comparto C12b
- c. possibilità di collegamento con il verde della campagna

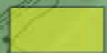


VERDE DELLA CAMPAGNA



FASCIA VERDE DI RISPETTO:

- a. uso come barriera frangivento per i venti invernali



TESSUTO URBANO ESISTENTE:

- a. necessità di integrazione dentro i comparti



STRADA CARRABILE PREVISTA DAL PRG:

- a. possibilità di accesso carrabile per i comparti



PROLUNGAMENTO DELLA STRADA CARRABILE



PERCORSO CICLOPEDONALE PREVISTO DAL PRG:

- a. possibilità di espansione dentro il comparto C12b
- b. possibilità di prolungamento verso la campagna



ESPANSIONE DEL PERCORSO CICLOPEDONALE

venti invernali

venti estivi

possibilità di rafforzare la visuale dalla città verso la campagna



9.00

16.00

27.67

DISTANZA OTTIMALE TRA GLI EDIFICI



planning
in a sustainable
way implies
different uses of
the territory

any type of urban area can be planned in a sustainable way

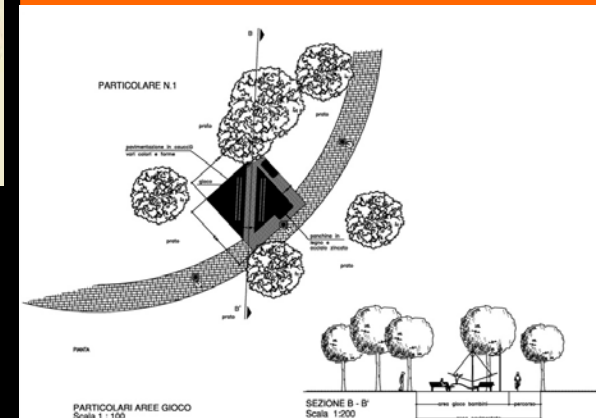
the residence

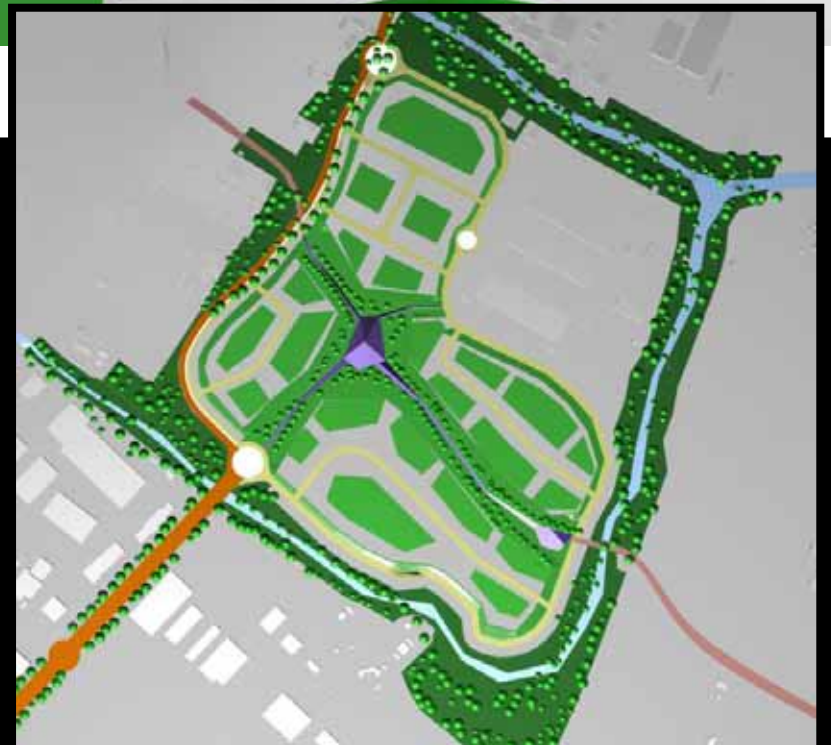
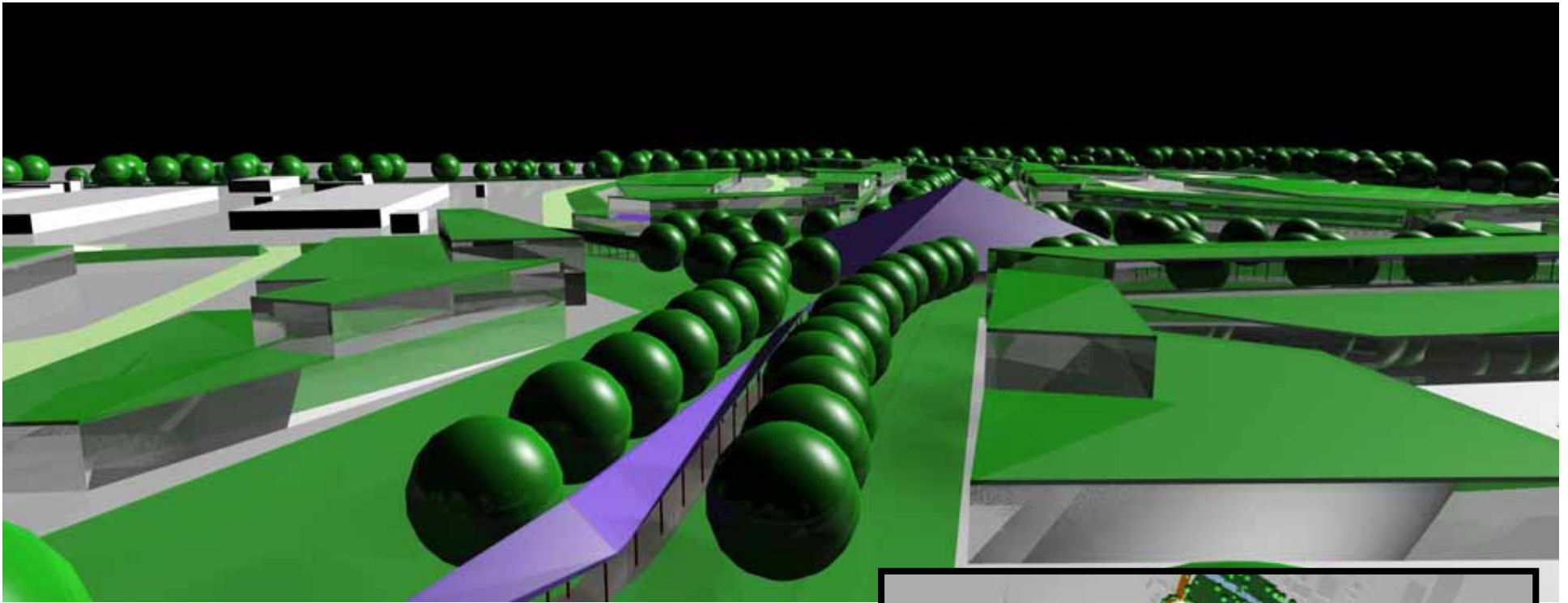


the industry



the park





project: Zipa Verde, Jesi

it is possible to plan
in a sustainable way
even if specific laws and
regulations do not exist

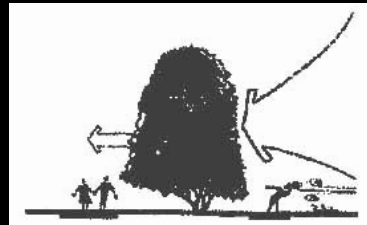
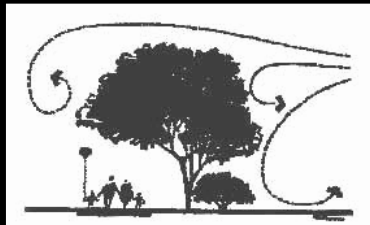
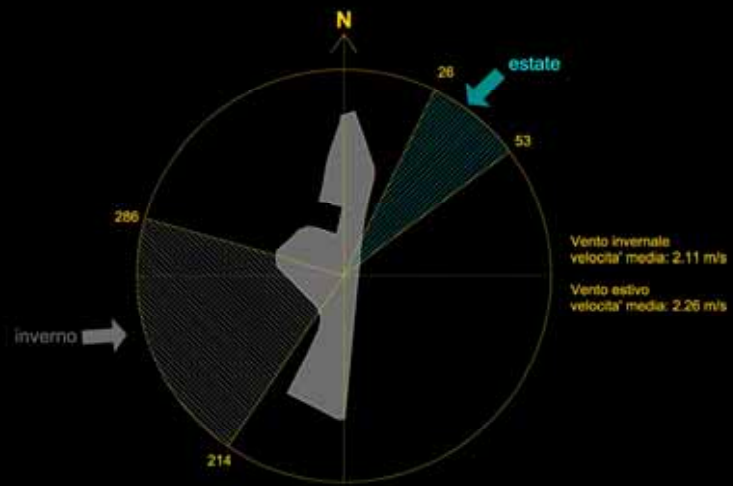
it depends on the political will to carry out
a different planning and realizable approach



agreement with
private owners

compensation of
urban planning costs

**control of the
environmental
characteristics**



project: PPE Appennini Alta, Jesi

winds

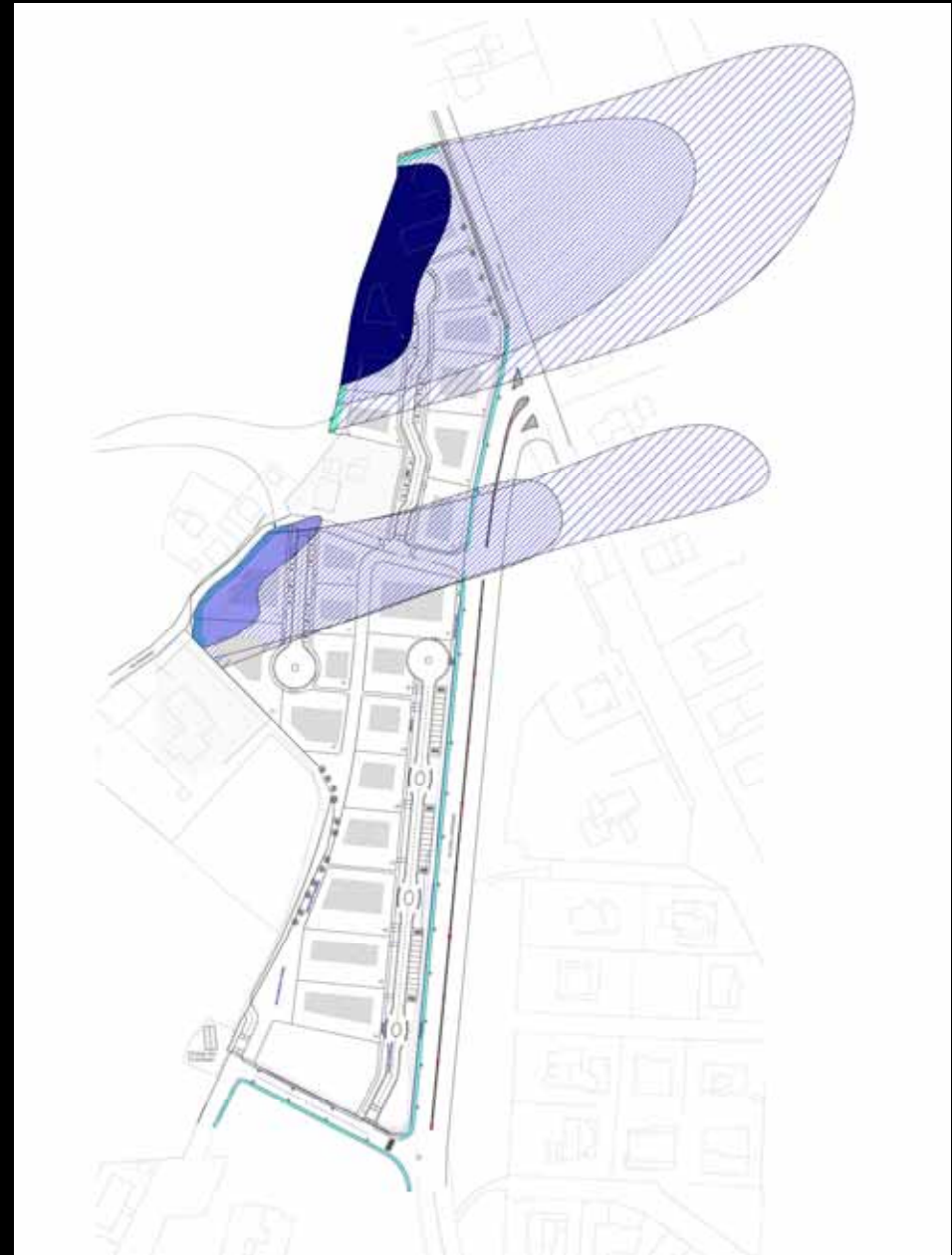
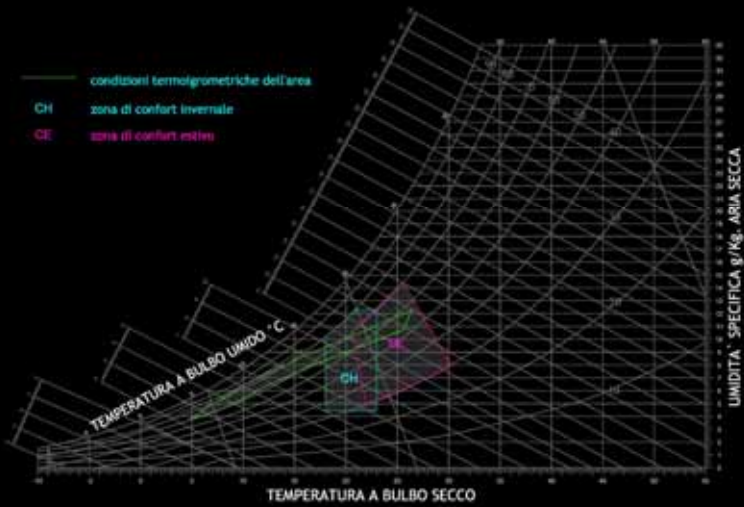


Diagramma del comfort



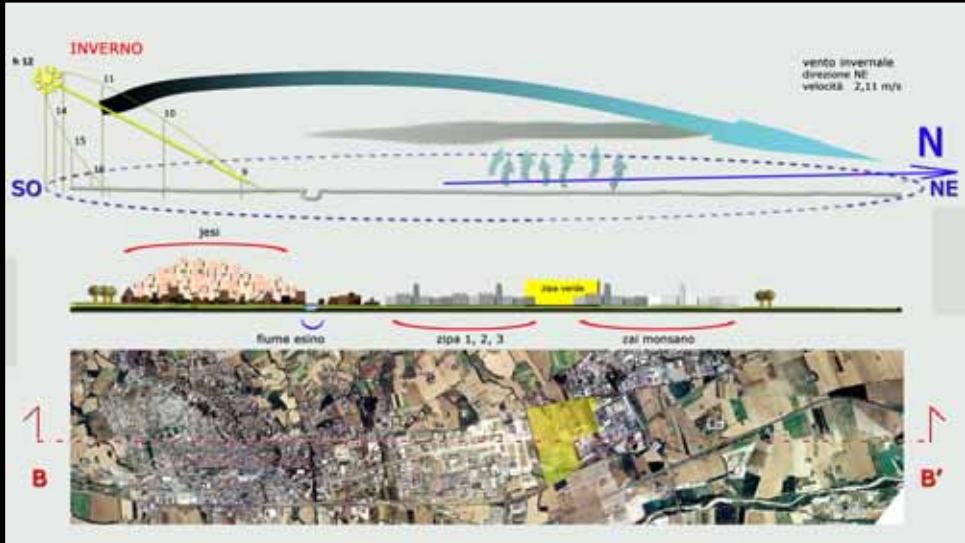
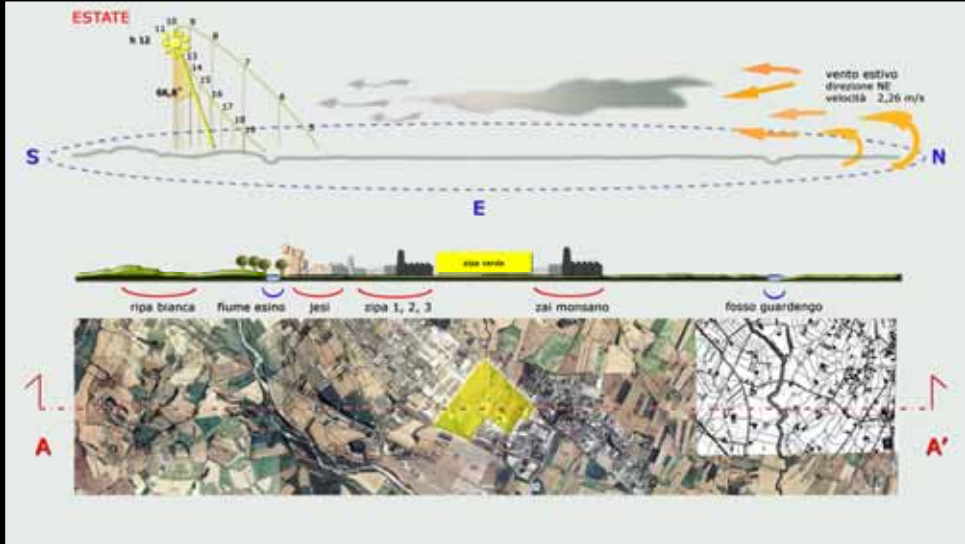
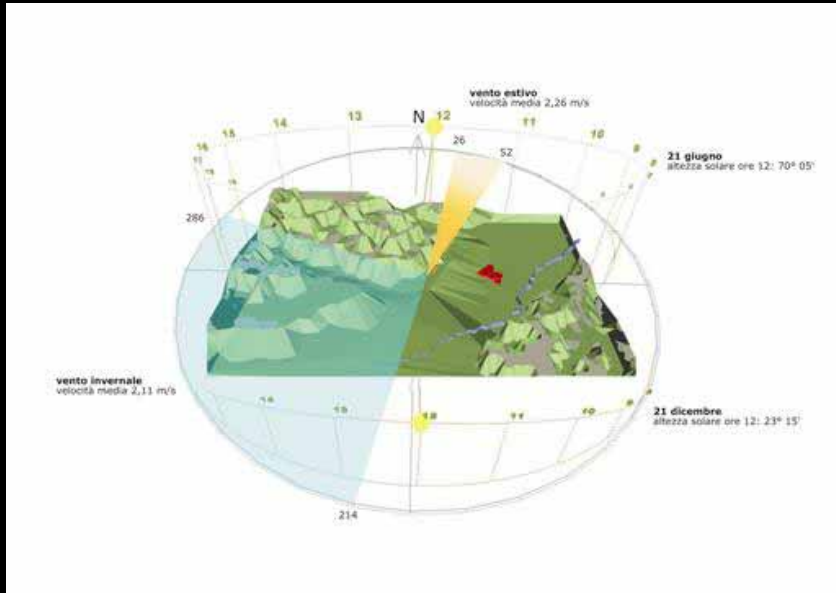
LEGENDA

- sagome di massimo ingombro degli edifici
- ombre degli edifici alle ore 8 del 21 giugno
- ombre degli edifici alle ore 12 del 21 giugno
- ombre degli edifici alle ore 16 del 21 giugno



project: PPE Appennini Alta, Jesi

humidity and temperature

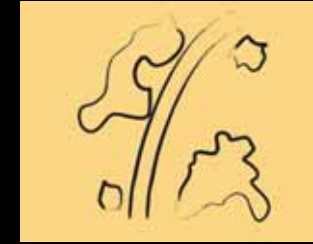


project: Zipa Verde, Jesi

bioclimatic approach

**control of the
territorial characteristics**

elements of architectural composition of the street



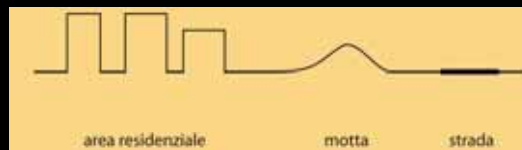
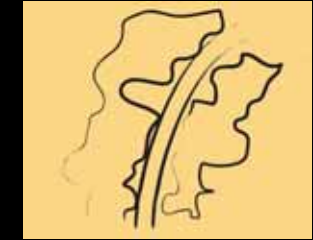
Apertura in curva

- superamento di un ostacolo= motivazione, avvertimento
- incoraggiamento della riduzione della velocità
- aumento del senso di ignoto

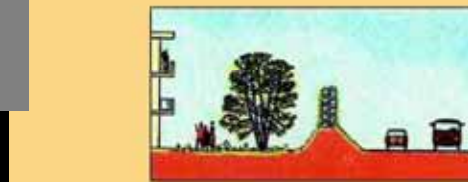


Effetto di 'enclosure'

- favorisce la percezione della curva
- enfatizza la linea della strada
- abbraccia con lo sguardo una porzione del paesaggio



1. La motta
barriera visiva che con la aggiunta di vegetazione diventa una barriera antirumore efficace



project: border street, Monte San Vito

landscape



differentiation of road axes



buffer zone



windbreak barrier



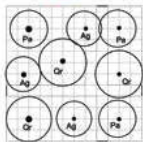
antinoise barrier

project: PPE Appennini Alta, Jesi

vegetation

Potenziamento e nuova realizzazione di formazioni boschive lineari di protezione del canale

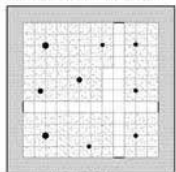
Bosco igrofilo 1:2 - schema di impianto



strato arboreo:
 Pe-Populus alba (pioppo bianco)
 Pe-Populus nigra (pioppo nero)
 Cr-Quercus robur (leccio)
 Pe-Fraxinus ornus (frassino)
 modulo minimo di impianto 30m x 20m = 600mq

1m 2m

Sesti di impianto delle formazioni boschive



strato arbustivo:
 Cm-Cornus mas (cornicola)
 Cm-Cornus sanguinea (sanguinella)
 Lv-Salis chamae (salice bianco)
 Lv-Salis viminalis (viminali)
 Lv-Salis purpurea (salice rosso)
 Lv-Ligustrum vulgare (ligustro)
 Lv-Salis Fragilis (salice fragile)

copertura massima 80%



Formazioni arbustive di sottobosco



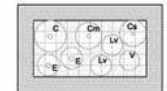
Profilo schematico del canale Allacciate di Ponte Galea

Formazioni arbustive medie

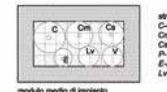
Arbustato mesoigrofilo (Ip01): 1:2 - schema di impianto



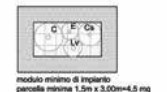
Prospetto



modulo massimo di impianto
 parcella minima 2,5m x 5,00m = 12,5 mq



modulo medio di impianto
 parcella minima 2,00m x 4,00m = 8mq



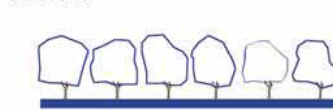
modulo minimo di impianto
 parcella minima 1,5m x 3,00m = 4,5 mq

1m 2m

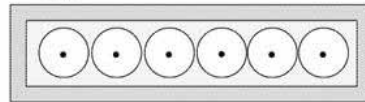
strato arbustivo:
 C-Crotaegus oryocarpa (biancospino)
 Cm-Cornus mas (cornicola)
 Cr-Cornus sanguinea (sanguinella)
 Lv-Ligustrum vulgare (ligustro)
 Lv-Ligustrum vulgare (ligustro)

Filetti lungo strade e percorsi FI

(Schema di impianto)



Prospetto



Sesti di impianto dei filetti

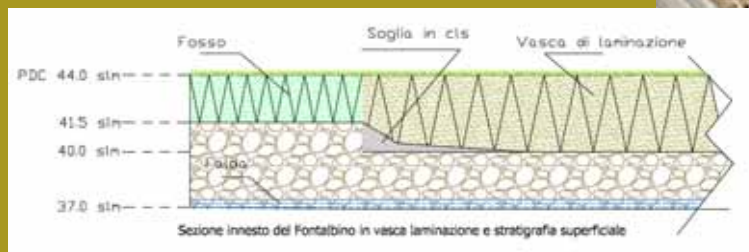
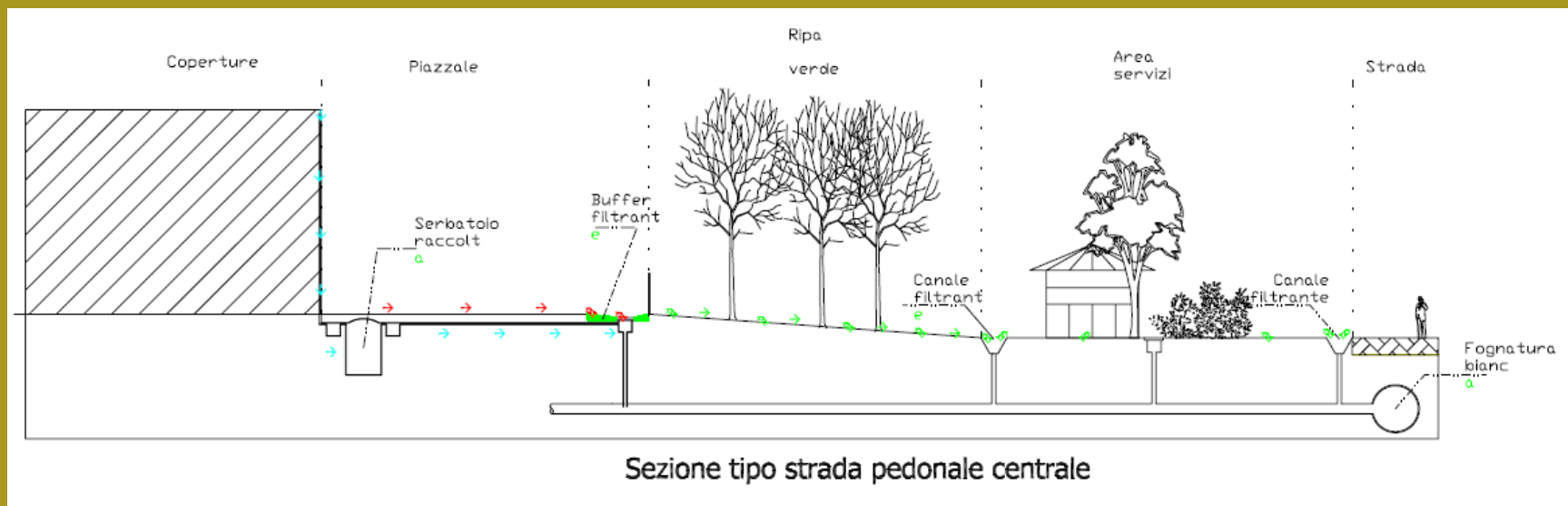
strato arboreo:
 Qp-Quercus pubescens (roverella)

1m 2m



project: Zipa Verde, Jesi

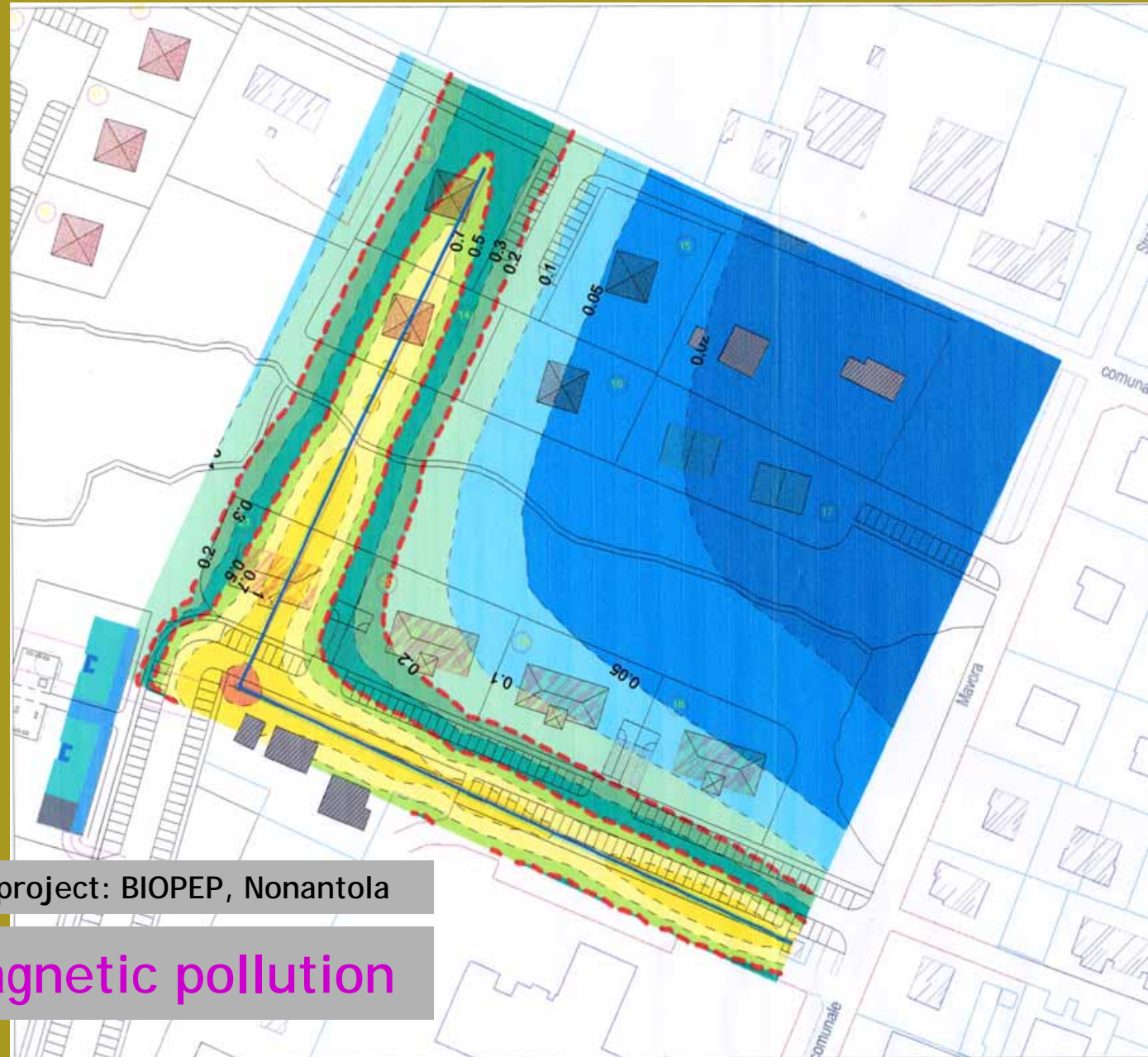
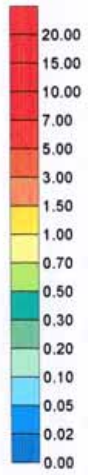
vegetation and water



project: Zipa Verde, Jesi

water treatment

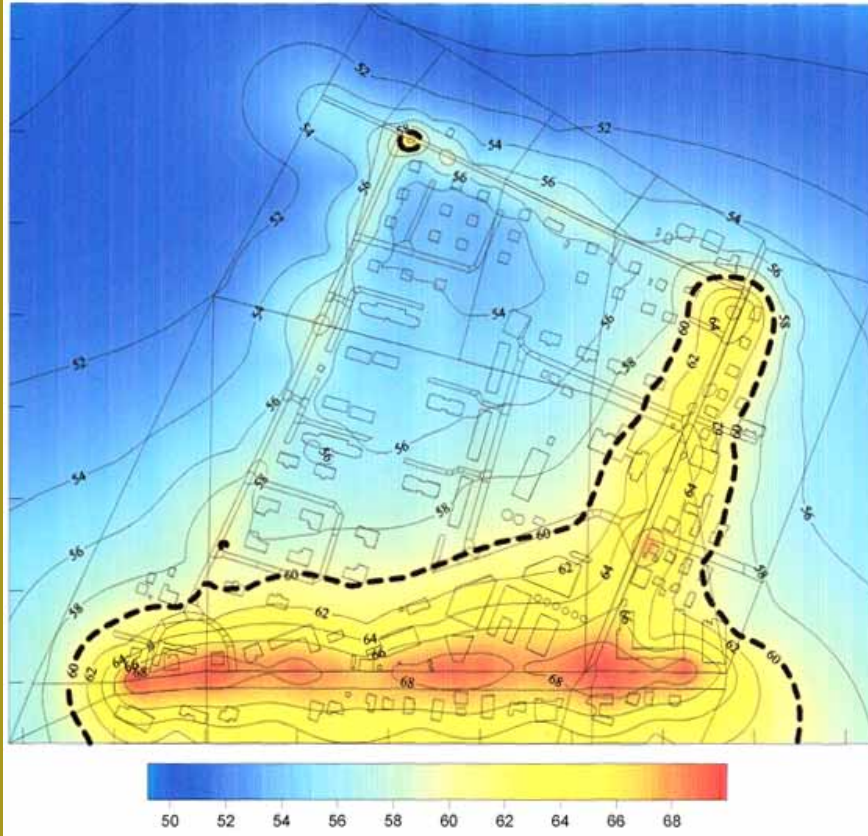
SCALA 1:1000
Condizioni di calcolo
Linea 15 kV - I=173 A



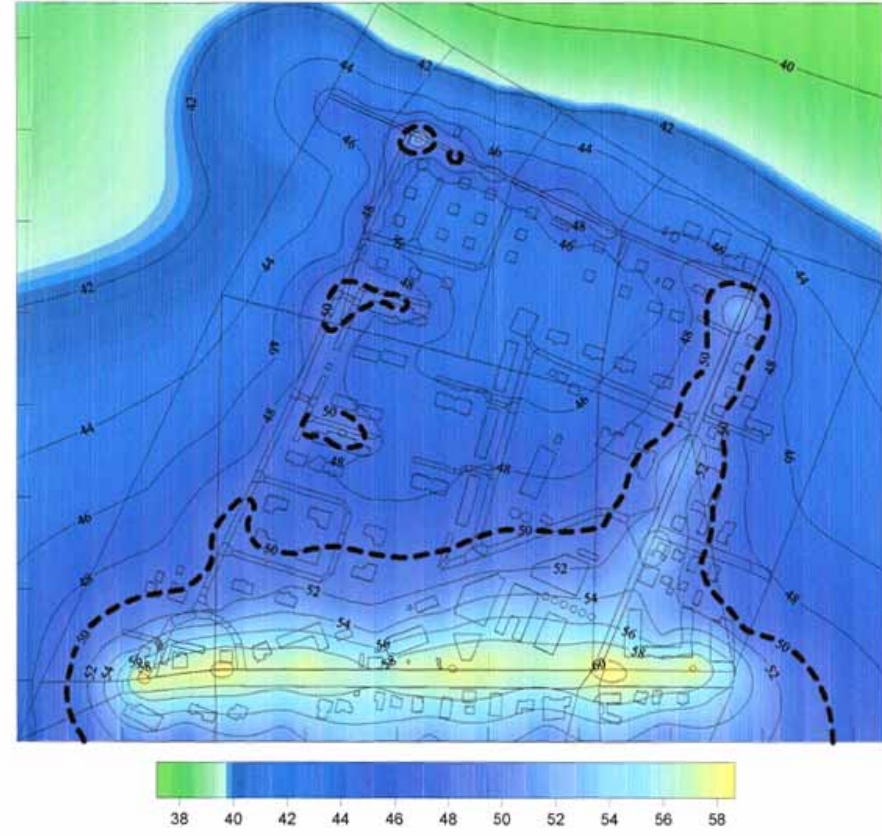
project: BIOPEP, Nonantola

electromagnetic pollution

Stato Futuro - Periodo Diurno

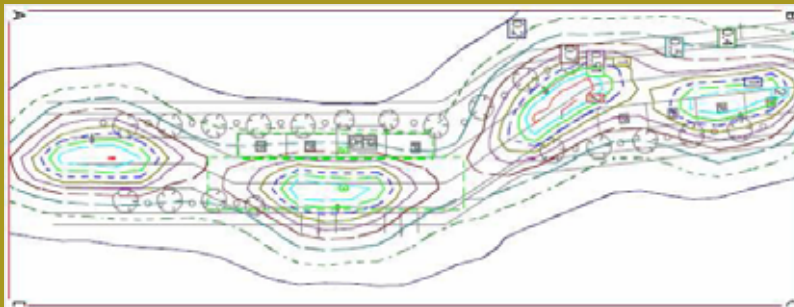
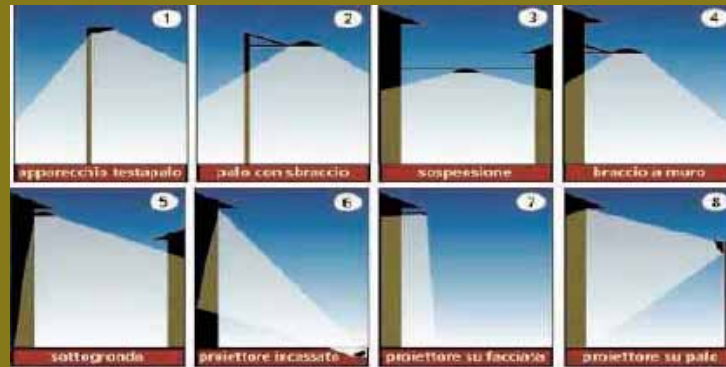
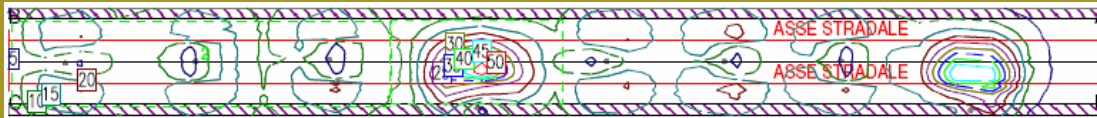


Stato Futuro - Periodo Notturno



project: BIOPEP, Nonantola

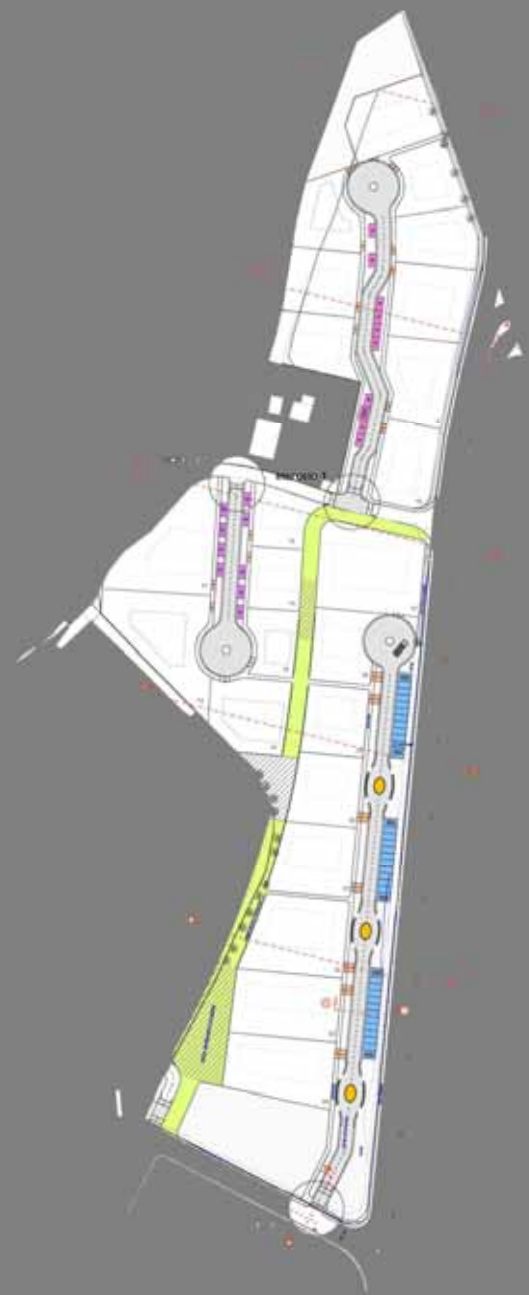
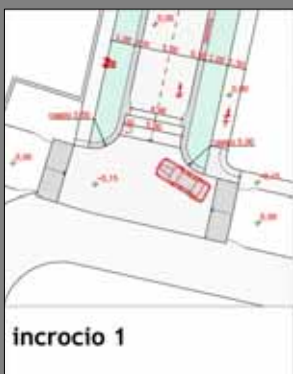
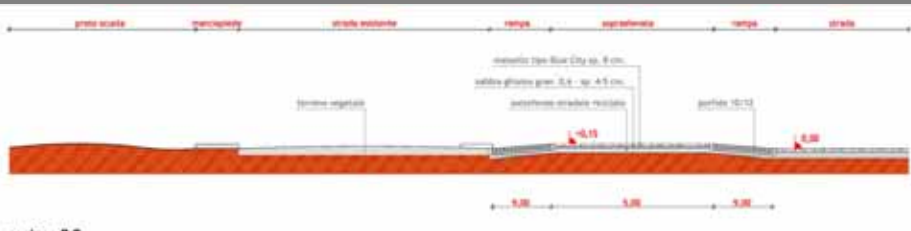
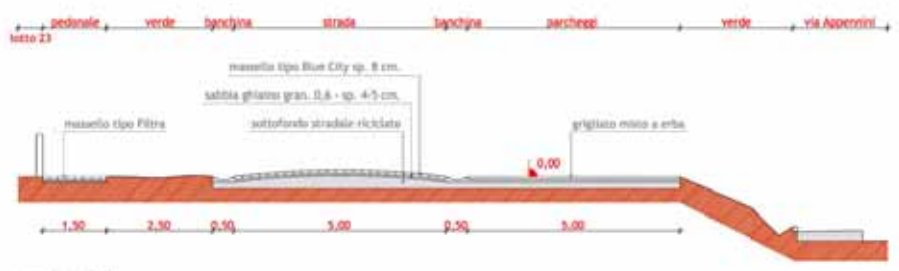
acoustic pollution



project: PPE Appennini Alta, Jesi

luminosity pollution

**control of the
technological
components and systems**



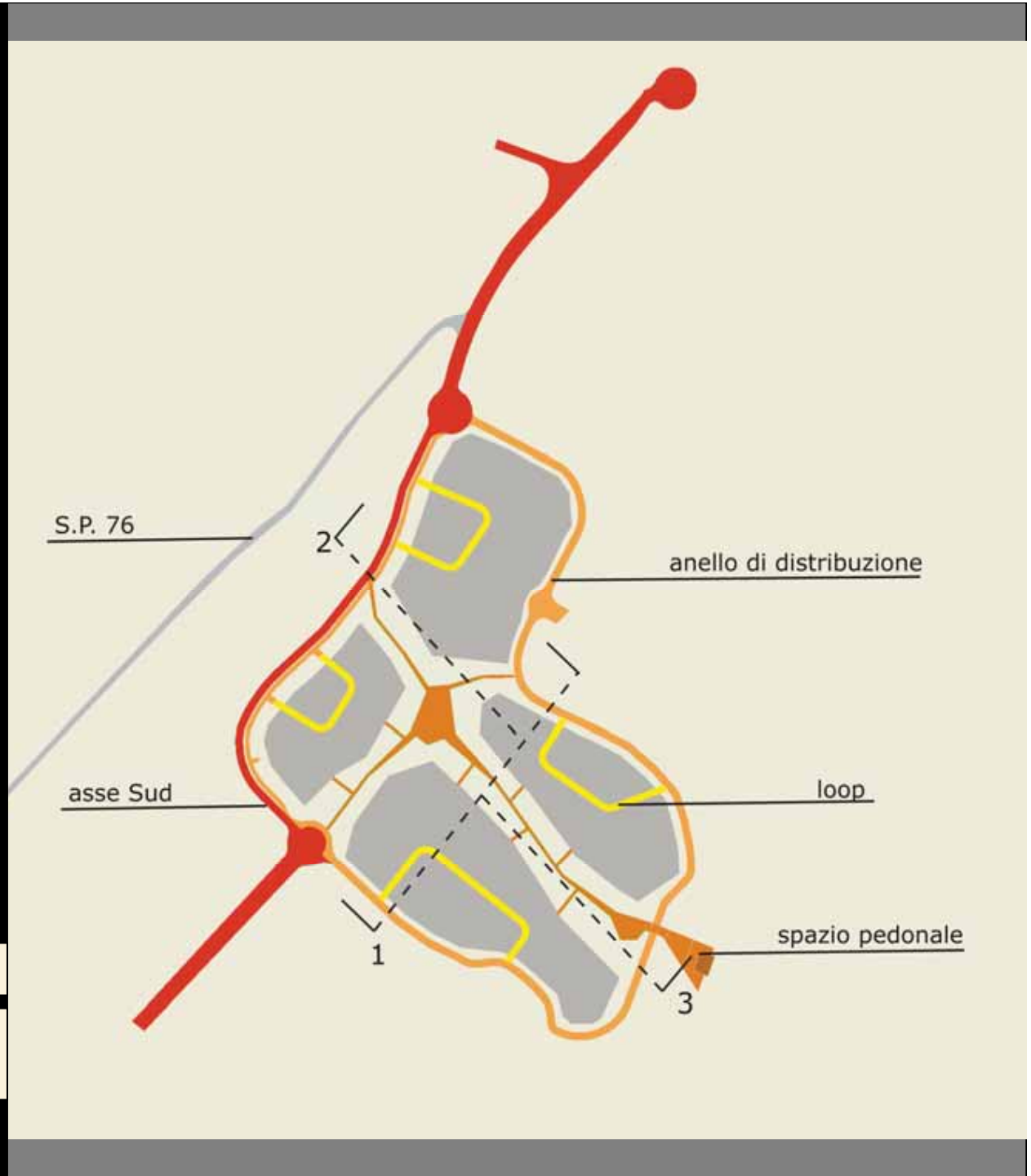
project: PPE Appennini Alta, Jesi

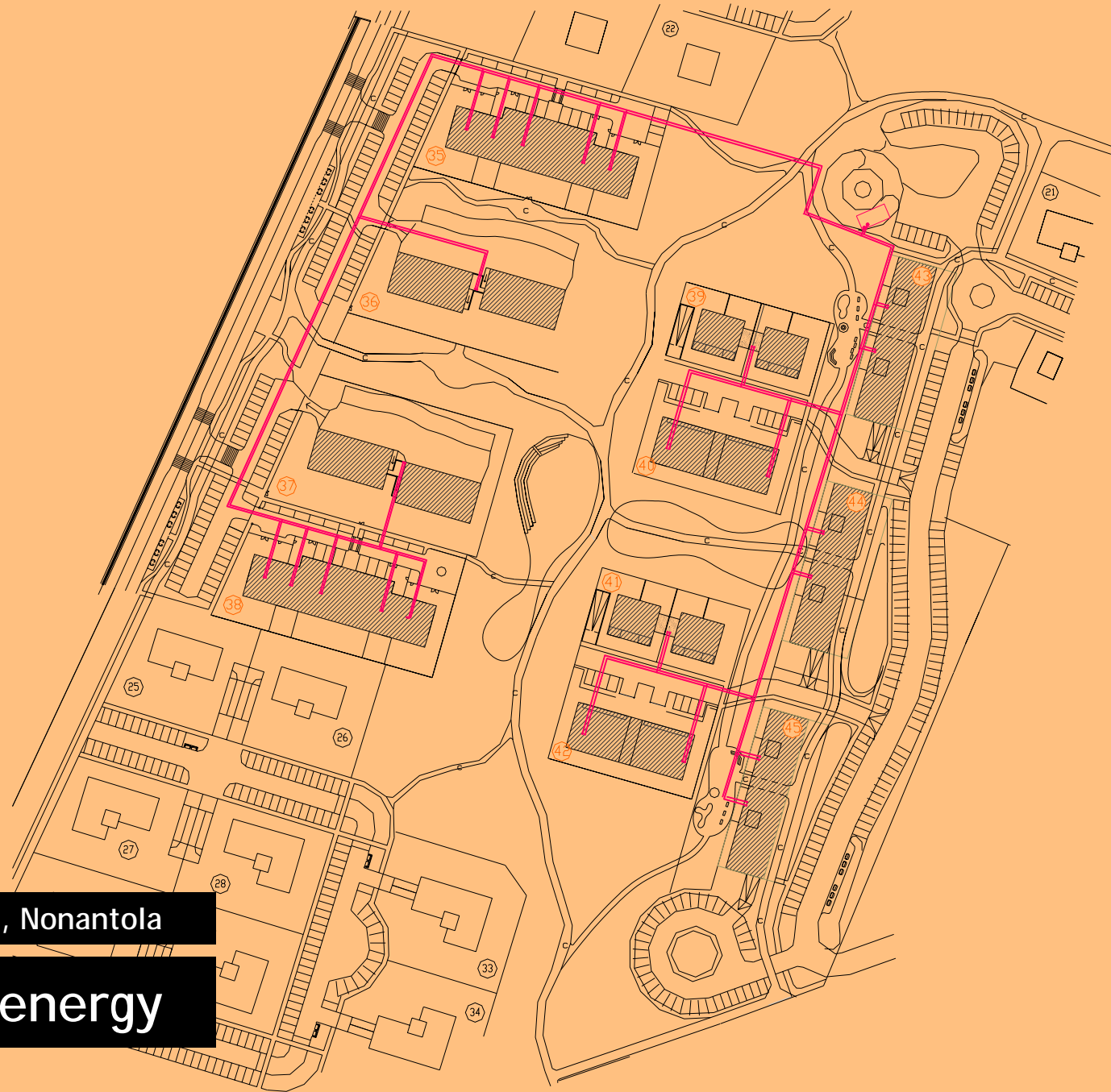
mobility



project: Zipa Verde, Jesi

mobility





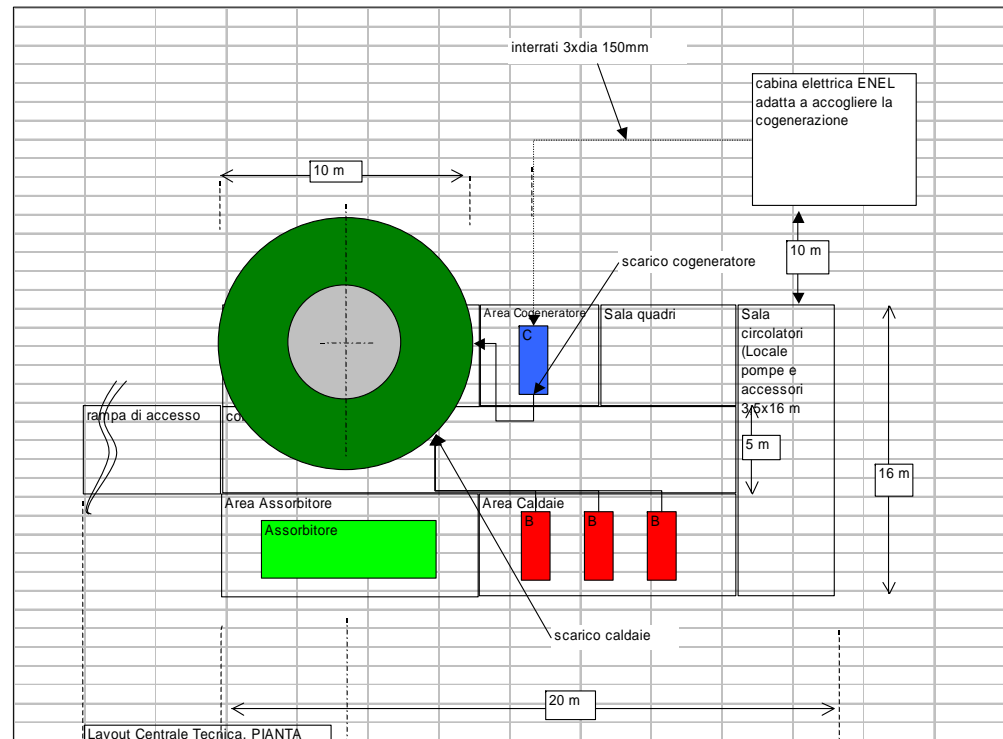
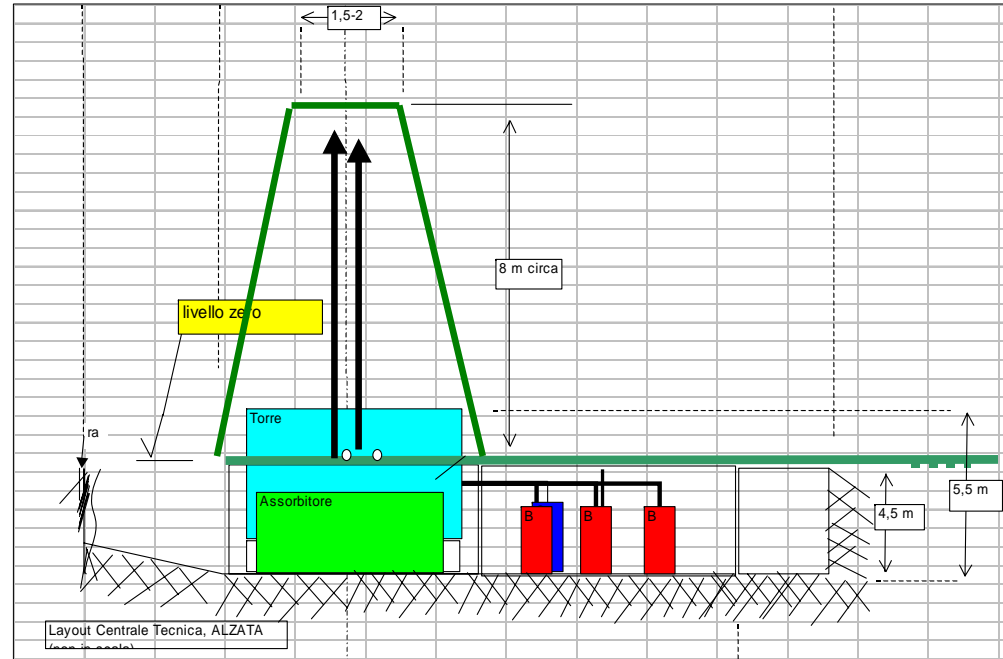
project: BIOPEP, Nonantola

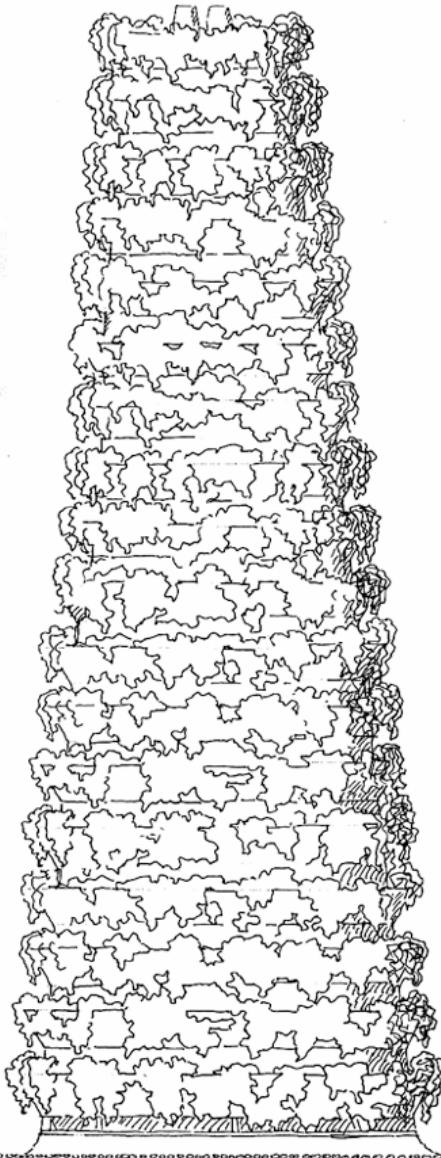
energy



project: BIOPEP, Nonantola

energy

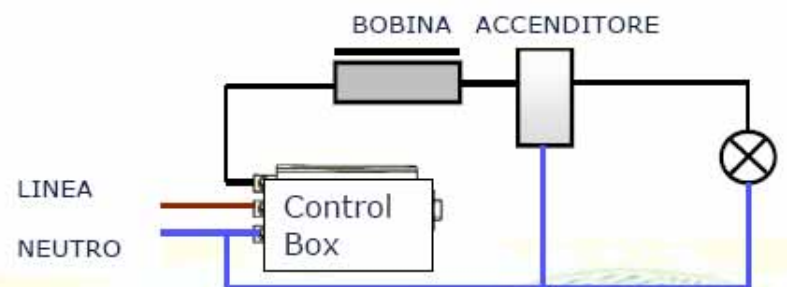
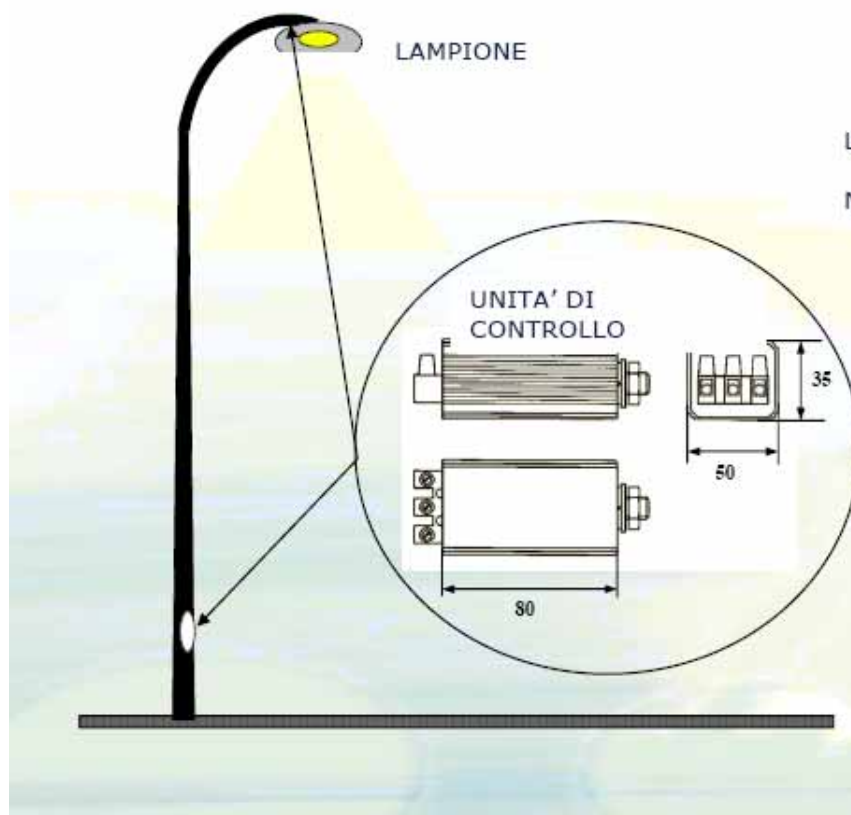




project: BIOPEP, Nonantola

energy

Posizione dell'unità di controllo.



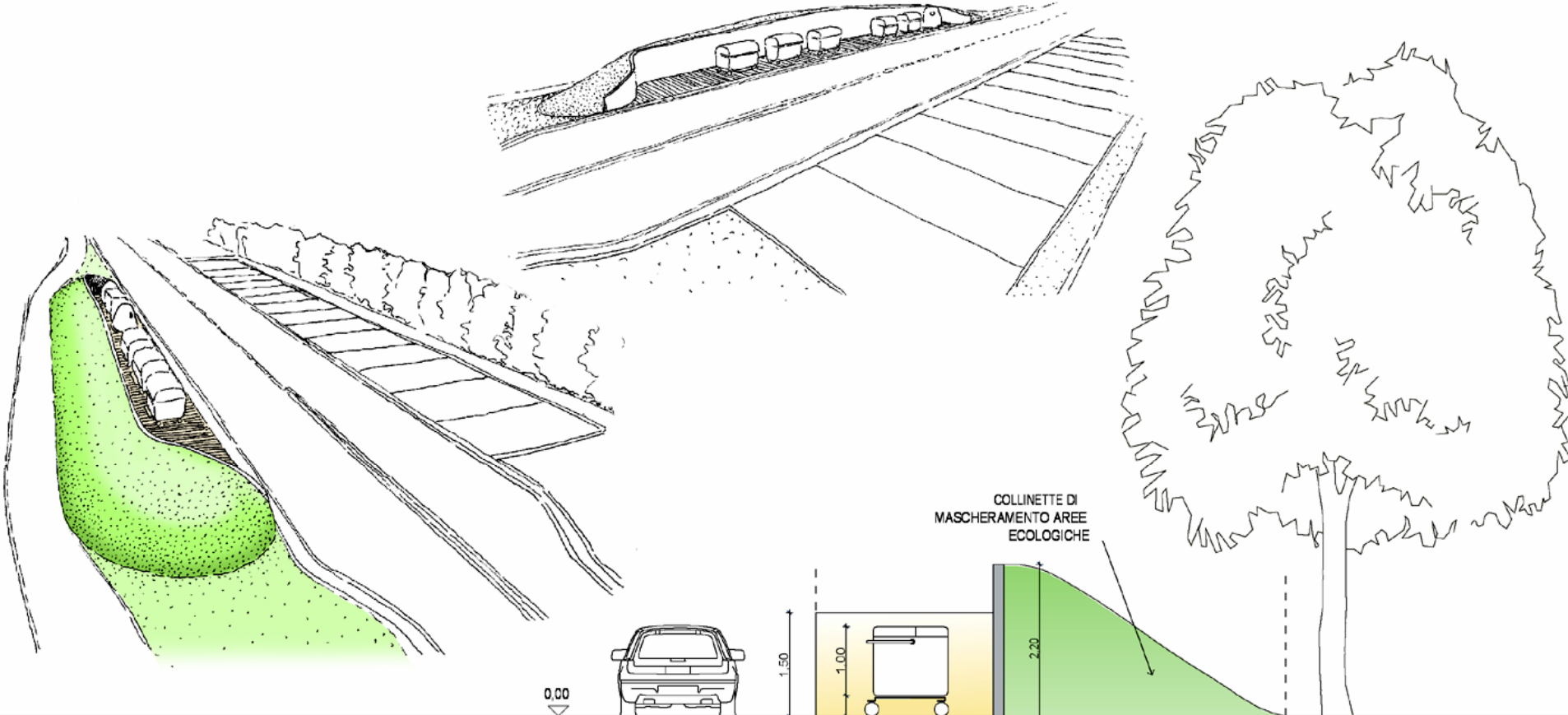
Schema dei collegamenti.

project: Appennini Alta, Jesi

public illumination



ecological "islands" behind vegetation hills



project: BIOPEP, Nonantola
waste management

SEDE STRADALE

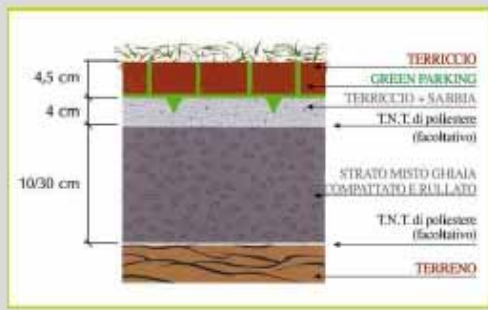
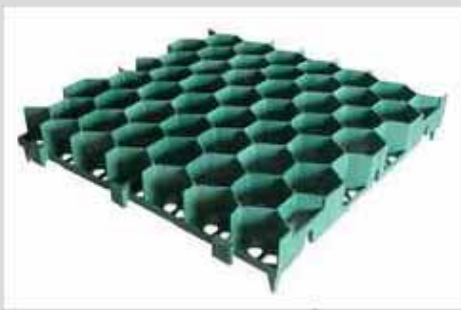
AREA ECOLOGICA

COLLINA VERDE

VERDE

2.57

4.23



pavimentazione in plastica/erba per parcheggi



pavimentazione in cls/erba per parcheggi

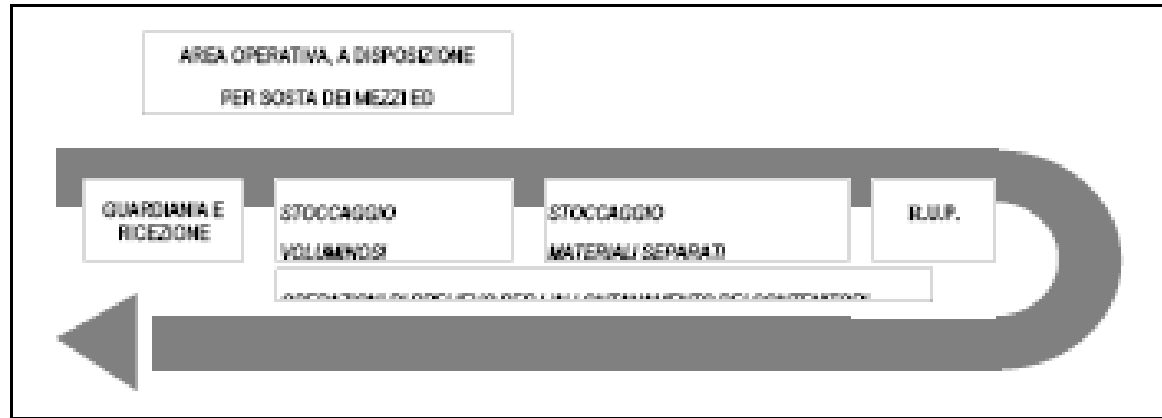
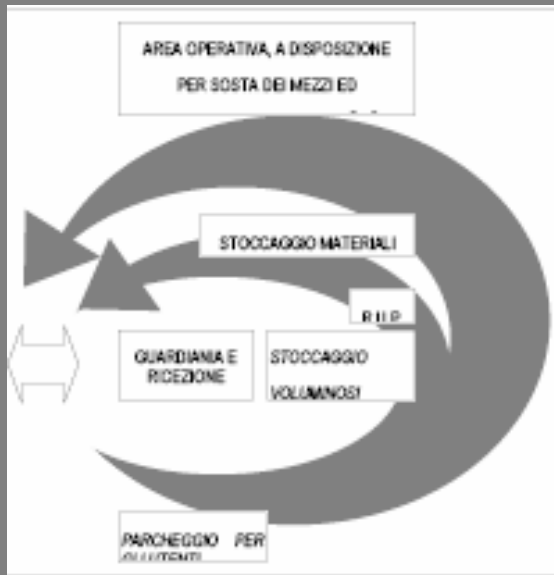


pavimentazione per percorsi pedonali

project: PPE Appennini Alta, Jesi

materials for urban works





project: PPE Appennini Alta, Jesi

site management



**control of building
performance
characteristics**

Functional characteristics of low-cost buildings:

1. Walls with windows
2. Passive solar systems and direct gains
3. Alternative energy
4. Reduction of energy consumption
5. Energy efficiency
6. Use of rain water
7. Reduction of hydrical consumption
8. Electrical installation
9. Calculation of useful surface
10. Ecological materials

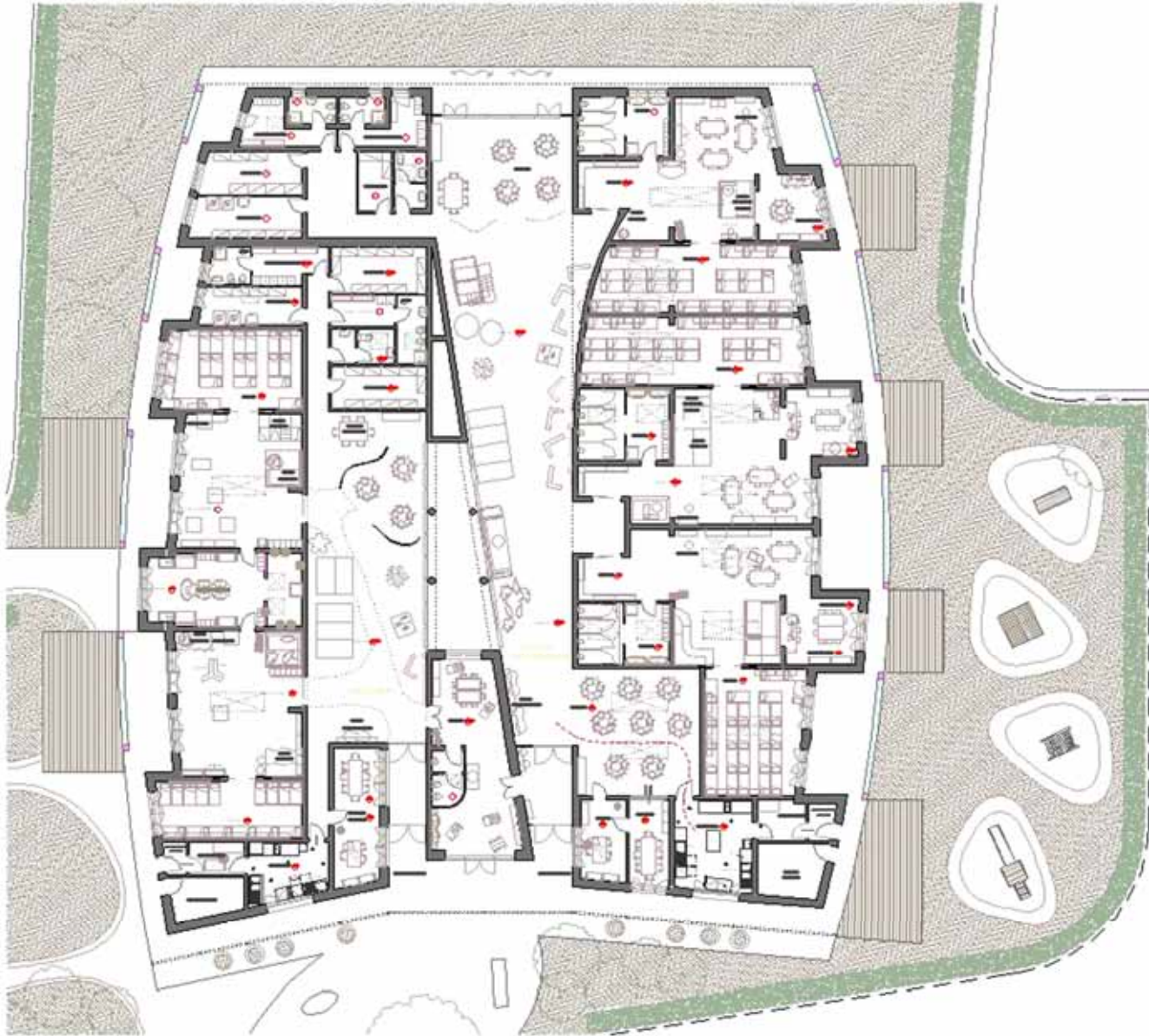
project: Compartment C6, Monte San Vito

building performance characteristics

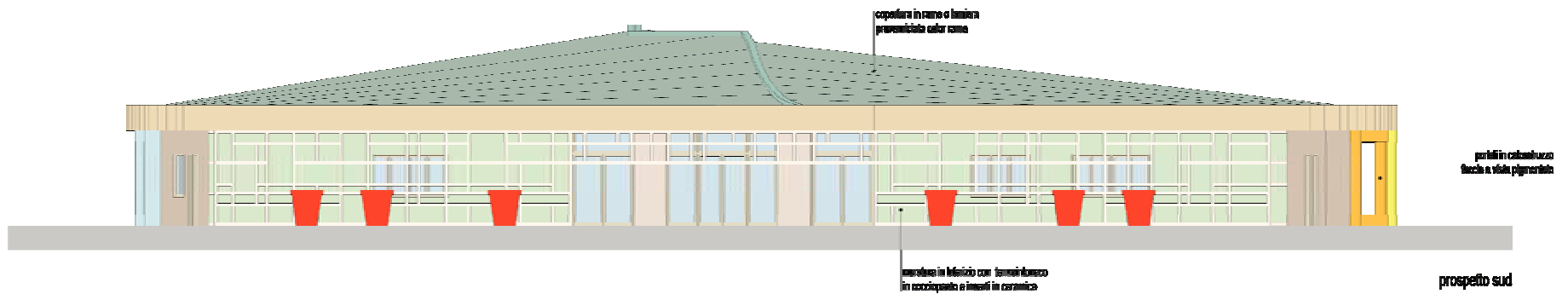
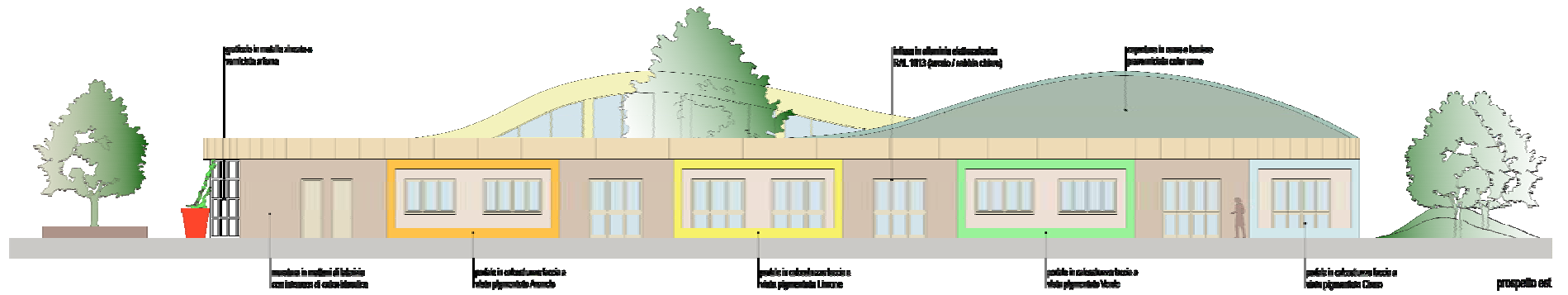


project: BIOPEP, Nonantola

building performance characteristics



general planimetry



views



construction site





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francesca.sorricaro@libero.it

