Secondary school of Champier

by CoCo architecture / 2021-07-20 12:44:47 / France / 1499 / FR

Primary energy need :

36.7 kWhep/m².an

(Calculation method : RT 2012)

ENERGY CONSUMPTION

Economical building *Building*

< 50	A
51 à 90	B
91 à 150	C
151 à 230	D
231 à 330	E
331 à 450	F
> 450	G

Energy-intensive building

Building Type : School, college, university
Construction Year : 2018
Delivery year : 2020
Address 1 - street : Le Chatelard 38260 CHAMPIER, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 7 445 m²
Construction/refurbishment cost : 15 000 000 €
Cost/m2 : 2014.78 €/m²

Proposed by :

COCO
architecture,
urbanisme,
etc.

General information

Construction of a new secondary school for 700 students, accommodation, a gymnasium and a sports area.

The school was built on a field, near the village center and a bourgeois house "Le Châtelard", whose is meant to be transformed into public facilities.

The construction of the new secondary school is an opportunity to rethink the functioning of the village as a whole. Thus, the project is organized around a new pleasant, tree-lined lane, which links the north of the village to the center for pedestrians and cyclists. The lane crosses the college plot, separated into two entities: on the one hand the teaching buildings and bus drop-off, on the other hand the sports area, which can therefore be used outside the school opening hours. .

The architecture of the college is marked by the adjustable, colored sunshade slats, which form a monochrome reminiscent of the surrounding nature. Thus, the building acts as a piece of landscape, forming from the road a foreground to the wooded hill. Vertical rhythms, changing with the seasons and users, sequence the building, like tree trunks punctuating the forest.

The college is conceived as an urban element, articulating a new part of the village of Champier by ensuring the covisibility of the equipment with the public space. Its base is made of translucent or opalescent glass, giving a view of a modular room, the manual arts room and the entrance hall. The courtyard opens onto the esplanade while half-board forms the interface with the main street. The gymnasium, shared with the municipality, also contributes to the dynamics that such equipment impels in the village. It has a glazed ground floor which communicates with the interior street. Outside of school time, the gymnasium brings the village to life with a polycarbonate facade that illuminates the landscape.

Sustainable development approach of the project owner

The Department of Isère is taking action to take into account the major issue of climate change.
It contributes locally to national objectives, mobilizes its agents, partners and suppliers. Improvements are continuallysought to reduce the environmental impact.
The department's strategy is defined in 8 axes, sith the first axis concerning **the Department's built heritage: renovate, insulate, build better, integrate more wood into buildings.**

Architectural description

The secondary school of the village of Champier, designed for 700 students, was an opportunity to rethink the functioning of the village as a whole. Thus, the project is organized around a new pleasant path, which crosses the college plot, separated into two entities: on the one hand the teaching buildings and bus drop-off, on the other hand the gymnasium and sports platform, which can therefore be used outside college opening hours. The architecture of the college is marked by the adjustable sunshade slats which form a colored facade giving the impression of a kinetic work of art which has taken place in front of the tree-lined hill. Now it is the users who give life to this moving painting, which moves, evolves, is endlessly recomposed, according to the seasons and uses. The architecture allows the students to see how the building works: the concrete structure, the wooden frame envelope, the acoustics and the technical equipment affixed directly to the raw concrete. All these elements participate with discretion in the construction of the technical knowledge and offer a sensitive experience of space and architecture.

Photo credit

Edouard Decam

Stakeholders

Contractor

Name : DEPARTEMENT DE L'ISERE
Contact : MARC COULON
http://www.isere.fr

Construction Manager

Name : CoCo architecture
Contact : com@cocoarchitecture.fr
http://www.cocoarchitecture.fr

Stakeholders

Function : Designer

Jean De Giacinto Architecture Composite

contact@jean-de-giacinto.com

https://www.jean-de-giacinto.com/presentation

Function : Other consultancy agency

BETREC

Function : Others

Atelier Roberta

Function : Structures calculist

Sigma

Function : Other consultancy agency

Terre Eco

Function : Others

GBA cuisine,

Function : Others

atelier Nomades architecture

Function : Others

CCG

Function : Others

frédérique f.thomas

Function : Others

Anne-Flore Labrunie

Energy

Energy consumption

Primary energy need : 36,70 kWhep/m^2.an

Primary energy need for standard building : 66,00 kWhep/m^2.an

Calculation method : RT 2012

Breakdown for energy consumption : Heating: 7.1 kWhEP / m².year DHW: 2.5 kWhEP / m².year Lighting: 7.6 kWhEP / m².year Auxiliary ventilation: 19.4 kWhEP / m².year Distribution auxiliaries: 0.1 kWhEP / m².year

Envelope performance

Envelope U-Value : 0,46 $W.m^{-2}.K^{-1}$

More information :
Wood frame wall: 0.15 W / m².K
Roof terrace: 0.12 W / m².K
Paving on grade: 0.17 W / m².K
Joinery (Uw / Ug): 1.3 / 1.1 W / m².K

Absence of false ceilings in the rooms (raw concrete slab) and visible concrete walls for thermal inertia.

Indicator : I4

Air Tightness Value : 0,67

Renewables & systems

Systems

Heating system :
- Others
- Wood boiler

Hot water system :
- Wood boiler

Cooling system :
- No cooling system

Ventilation system :
- Double flow heat exchanger

Renewable systems :
- Biomass boiler

Renewable energy production : 26,00 %

Other information on HVAC :
Heating via double-flow ventilation (hot water terminal coils)

Solutions enhancing nature free gains :

Environment

Urban environment

The establishment of the college of Champier, was made on a field, near the center of the village and a middle-class house "Le Châtelard", whose vocation is to be transformed into public equipment.
The construction of the new college is an opportunity to rethink the functioning of the village as a whole. Thus, the project is organized around a new soft, tree-lined lane, which will allow pedestrians and cyclists to link the north of the village and the Bourg center. This crosses the college plot, separated into two entities: on the one hand the teaching buildings and bus drop-off, on the other hand the sports area, which can thus be used outside the college's opening hours. .

Products

Product

Colt

https://www.coltinfo.fr/brise-soleil.html

Product category : Finishing work / Indoor facilities

Costs

Construction and exploitation costs

Total cost of the building : 15 000 000 €

Contest

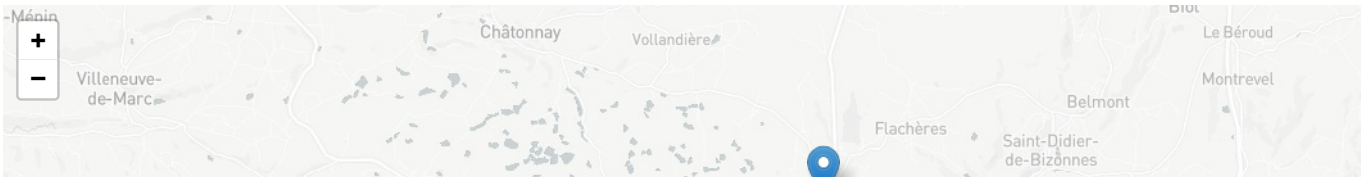
Reasons for participating in the competition(s)

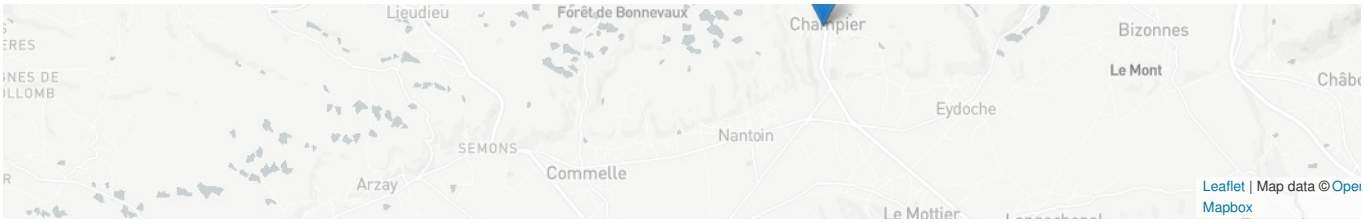
- Un travail d'intégration paysagère important.
- Un bon confort thermique et acoustique.
- Ouverture d'un bâtiment au grand public en dehors des heures d'utilisation par le collège.
- Enveloppe en ossature bois.
- Chaufferie biomasse.

Building candidate in the category

Prix du public

GREEN SOLUTIONS AWARDS
POWERED BY CONSTRUCTION21





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