134 Nationalities – 1 Territory

New Developments

Historical Heritage

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Saint-Denis, Paris, France

Paris Infrastructure 2024

Industrial Past
Sustainable Urban Mobility

Urban circuit: 3.5 km Route
Sustainable Urban Mobility + Urban circuit: 3.5 km Route = URBAN MOSAIC
Master Plan

25,000 m²
Public Space

16,800 m²
Housing

8,565 m²
School Complex

2,365 m²
Blue Infrastructure
A new cultural icon emerges from the park as this historical building is restored as a new museum of the city.
This is a specialized place for rental and storing non-motorized vehicles allowing mobility through the city while taking care of the enviroment.
Taking advantage of Saint-Denis multicultural population, we propose a space to promote and exchange such richness through the diversity of its food.
A brand new nursery school and primary school complex is built in Wood, right in front of the new Coignet Avenue.

Nursery school

Activity Center (Open to public outside of school hours)

Primary school

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School Complex
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Environmental and social rehabilitation
Superficial strategies

Blue Infrastructure
1. Water Collector
2. Filter and transportation
3. Collective System
4. Treatment process
5. Reuse
CLT Cross Laminated Timber

- 160 tons of CO₂ stored in the wood
- 340 tons of CO₂ avoided greenhouse gas emission
- 490 tons of CO₂ potential carbon benefit
- 2 hours burn rate
- At least 50% timber

French Sustainability law

Structural System: Benefits
Urban Mosaic: A meeting place, coexistence and environmental awareness
1. COMMUNICATIONS
2. ESCAPE
3. CONTAINMENT

Fire safety: CLT

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Fire safety: Strategy

A B C D

2 HRS BURN RATE

INSULATING CAPACITY

UNAFECTED WOOD CORE

PYROLYSIS LAYER

CHAR LAYER
Better breathing, moisture control, lower energy costs, fewer allergens, better sleep.

**Gyproc RhinoBoard 9.0mm**
Thermal insulation:
- $R = 0.042\text{m}^2\text{K/W}$, $k = 0.21\ \text{W/mK}$

**Gyproc Plaster Boards**
Active A+ solution

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**Design for Indoor Air Quality**
- Air filtration
- Circulate indoor and outdoor air
- Plants for microclimatic cool air

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**Oxygen Production by Urban Trees**

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ACOUSTIC COMFORT

Hear

COMFORT CLASS WITHIN LIVING UNITS
≥ 40 Airborne sound insulation of partitions
≥ 45 Impact sound insulation

INSULATION ZONES

- Sound insulating glass in facade
- Acoustic ceilings
- Sound insulating partition wall

ACOUSTIC CONTROL FB
Fiberglass isolber

ECLAZ ONE PLAIN CLEAR 4mm
\( R_{25}^L = 31 - 46 \) dB

FIBERGLASS ISOVER
Acoustic control FB

People sleeping, working, teaching or dancing... at the same time.

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NATURAL BUFFER
Control the indoor thermal environment by managing the air exchanges with the outside.

**ClimaVer Plus R**
- R Value: 0.76 m²·K/W

**ECLAZ ONE Planiclear 4mm**
- R (Glas): 3.1–1.4 W/m²K

**Arena Partition Wall**
- Reaction to fire: A1 Euroclasses
- Thermal conductivity: 0.036 W/mK

**Monthly Data**
- Relative humidity: 35.0% (Q1 = 79.25)
- Relative humidity: 15.0% (Q2 = 66.1)
- Avg. Temp. (°C): 12

**Air Tightness and Ventilation**
- Air Source Heat Pump
- Solar shading facade
- Hybrid ventilation system (natural + mechanical)

**Microclimate**
- Green facades
- Increased tree canopy
- Permeable paving

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Light is no longer simply “on” or “off”: Tunable white lighting according to the circadian rhythm.

Lighting Design Proposal

**Light Levels by Space**
- Bedroom: 250 lux
- Living room: 300 lux
- Toilet: 200 lux
- Corridor: 80 lux
- Kitchen: 450 lux

**SGG Cool-Lite SKN 165/165 II**
- C value: 0.24
- U Value: 1.3 W/m²K

**Lini-S Glow 209**
- Dynamic LED: 1900K - 5000K

**Natural daylight**
- Helps to maintain our sense of psychological and social balance.

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URBAN MOSAIC
reconnecting the expansion
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“Urban Mosaic is a local project that aims beyond its borders, the soul of this project is to improve people’s lives through sustainable spaces”