



Case Study 1 - Jonah Prada

355 11th Street

San Francisco, CA

OVERVIEW

- 14,000 SF, Three-Story Renovation completed in 2008
- Previously a run down historic industrial building
- Innovative redesign of original metal siding
- Rating: LEED-NC, v.2.2--Level: Gold
- Integrated Design Process: “All Hands Meeting”
- Site challenges:
 - ❖ Storm water management
 - ❖ Mandated replacement of historic facade

LOCATION

- 355 11th Street, San Francisco, CA

ARCHITECTS

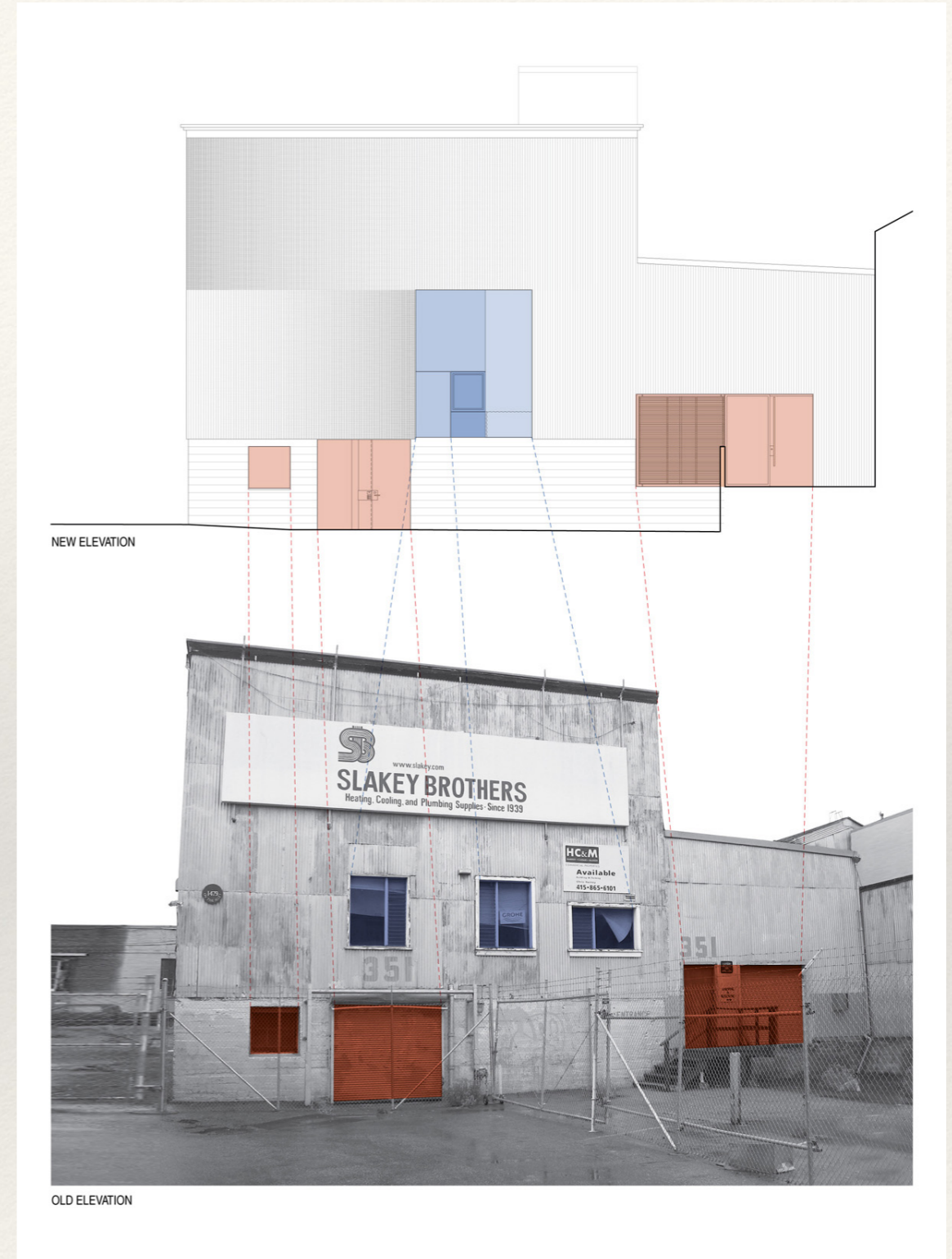
- Aidlin Darling Design

SITE

- Previously Derelict Warehouse grounds
- SoMa District
- Public transportation

Program

- Mixed-use: Restaurant, Industrial, Commercial Office-
 1. Restaurant and Bar (LEED-CI Platinum)
 2. General Contractor's Headquarters
 3. Architecture Firm



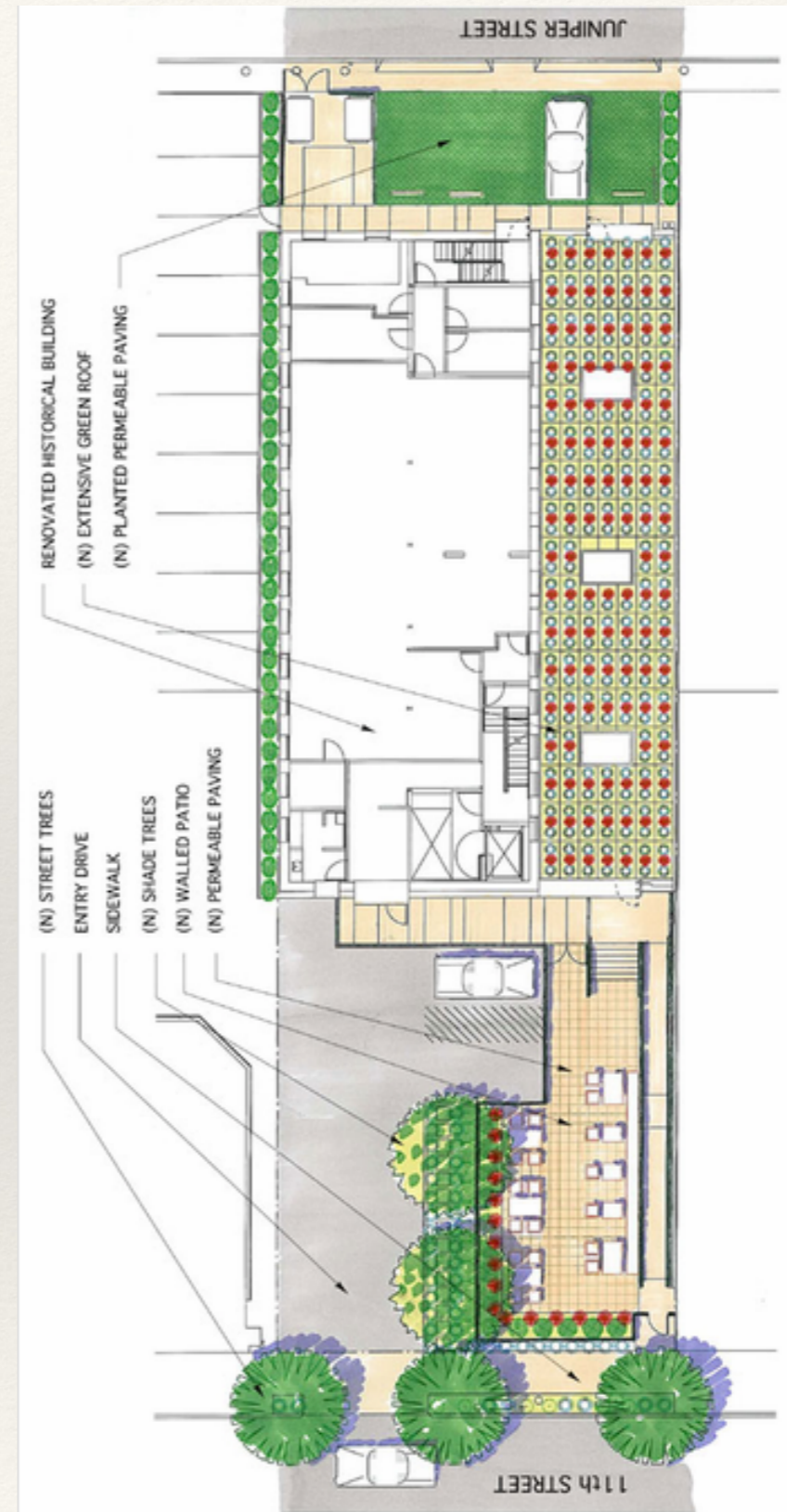
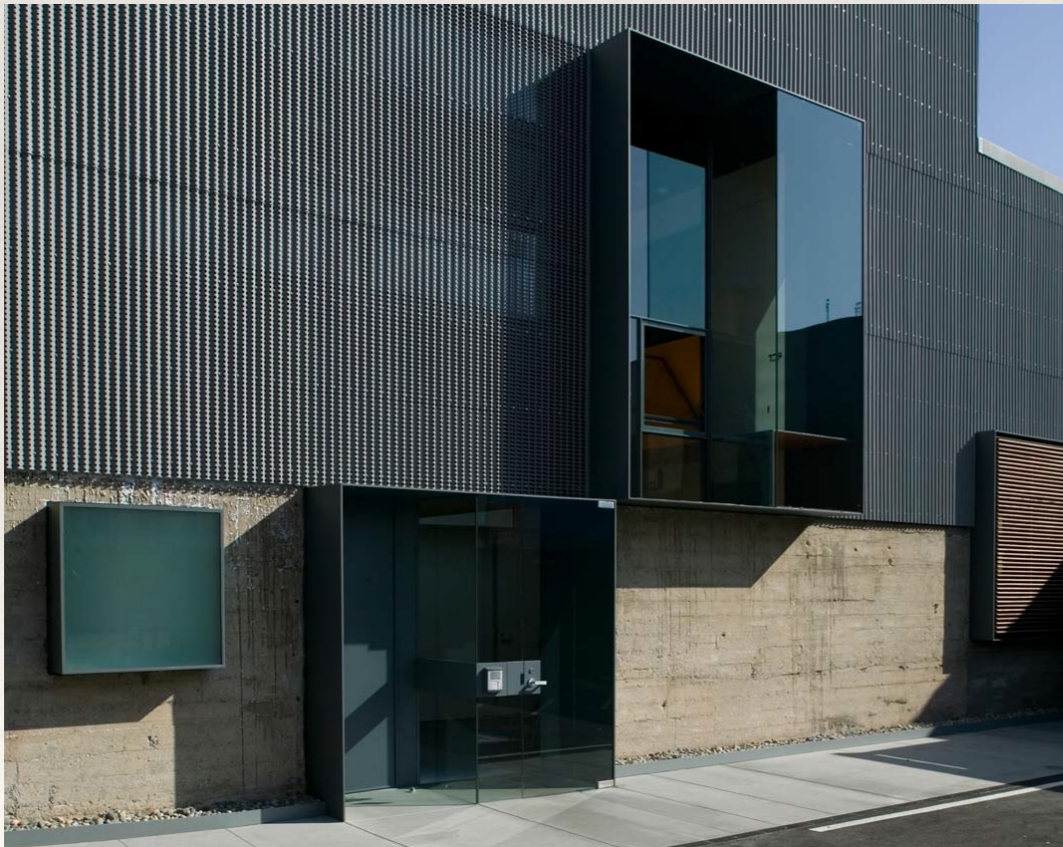
Site

Public Access

- Bart, Muni, Train
- Bicycle parking, showers and lockers on site
- Six parking spots (4 CNG Spots)

Site Environmental

- Grass-paver system for parking
- 85% of non-building site permeable surface
- 90% of site surfaces planted or high-albedo
- Xeriscaping/Living Roof
- Lot size: 11,458 SQ





SECOND FLOOR



THIRD FLOOR

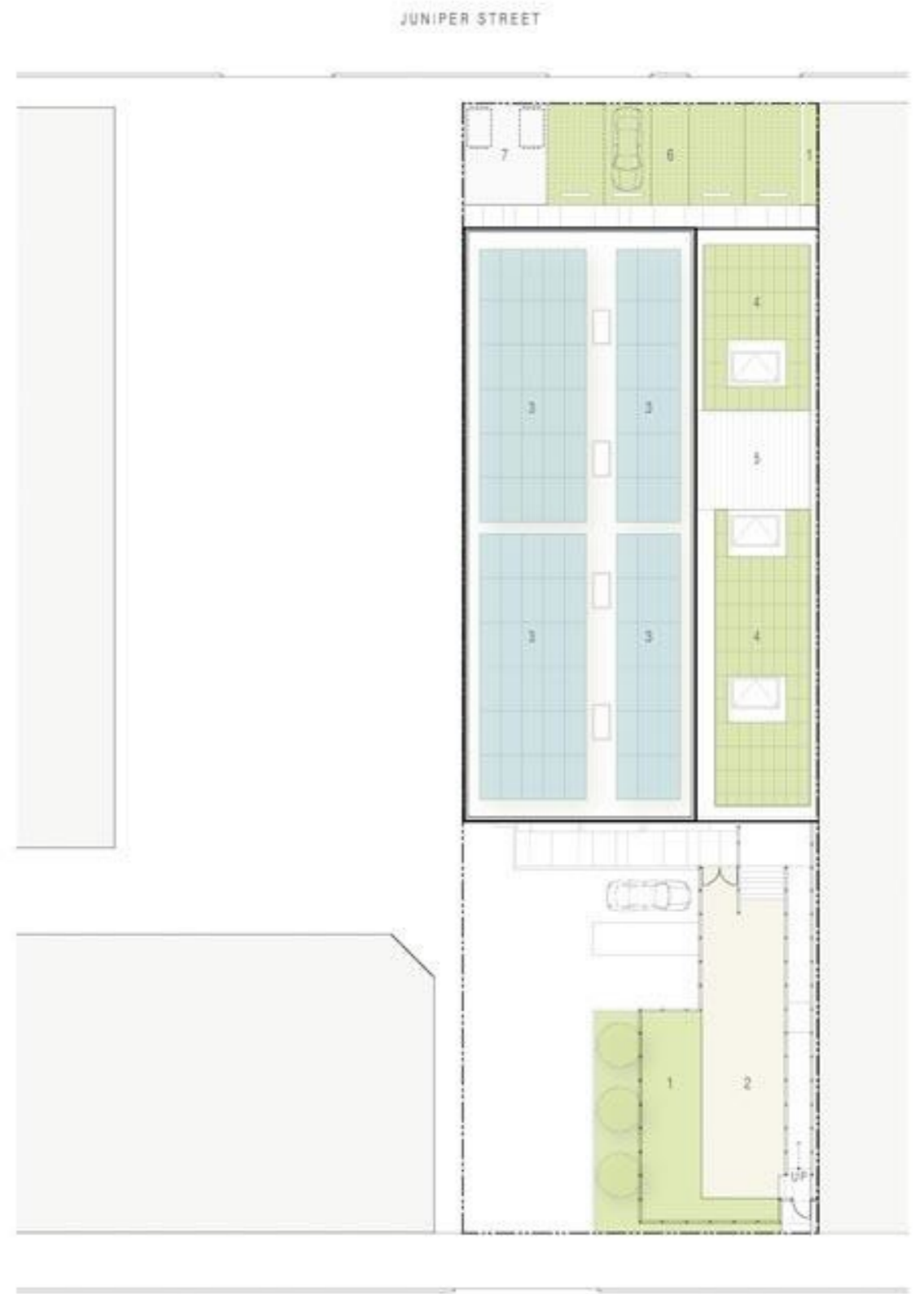


FIRST FLOOR

- OFFICE SPACE
- RESTAURANT
- COMMON AREAS
- SUPPORT SPACE

FLOOR PLANS

- 1 LOBBY
- 2 BICYCLE STORAGE
- 3 RESTAURANT - DINING
- 4 RESTAURANT - KITCHEN
- 5 RESTAURANT - SUPPORT
- 6 CONFERENCE ROOM
- 7 RECEPTION
- 8 OPEN OFFICE
- 9 KITCHEN / BREAK ROOM
- 10 OFFICE SUPPORT SPACE
- 11 PRIVATE OFFICE
- 12 DECK
- 13 LIVING ROOF



JUNIPER STREET

11TH STREET

SITE PLAN

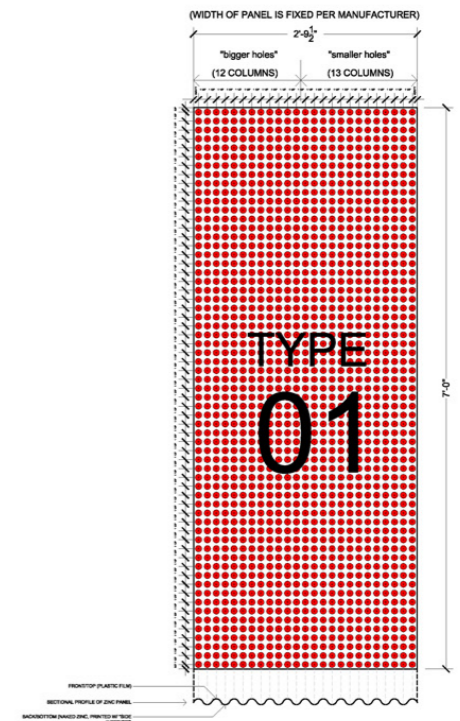
- 1 PLANTING BED
- 2 DINING COURT (PERVIOUS PAVING)
- 3 PHOTOVOLTAIC SOLAR PANEL ARRAY
- 4 LIVING ROOF
- 5 DECK
- 6 PARKING (CELLULAR GRASS PAVING)
- 7 RECYCLING



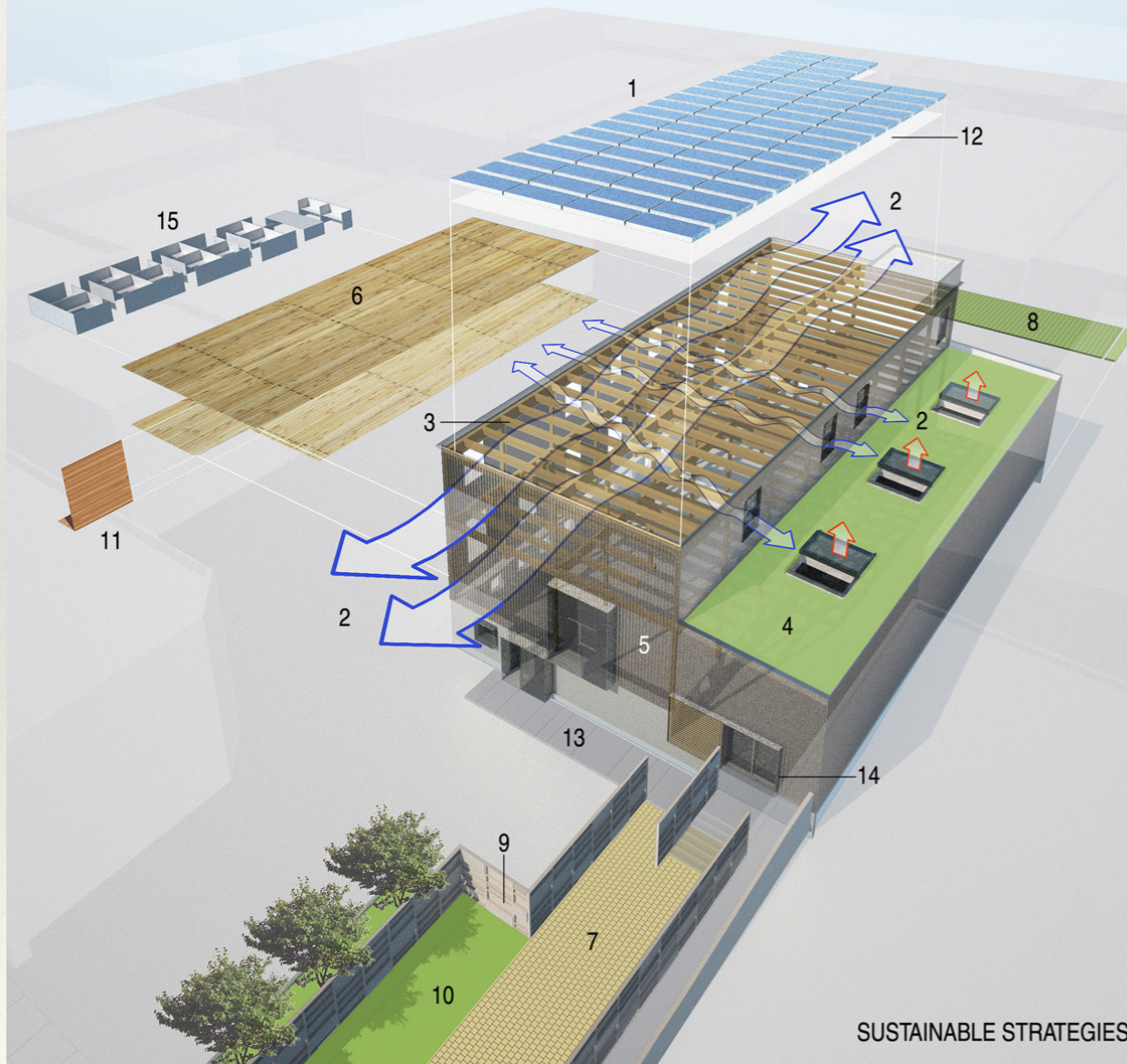
Breathable Skin

Zinc perforated metal cladding

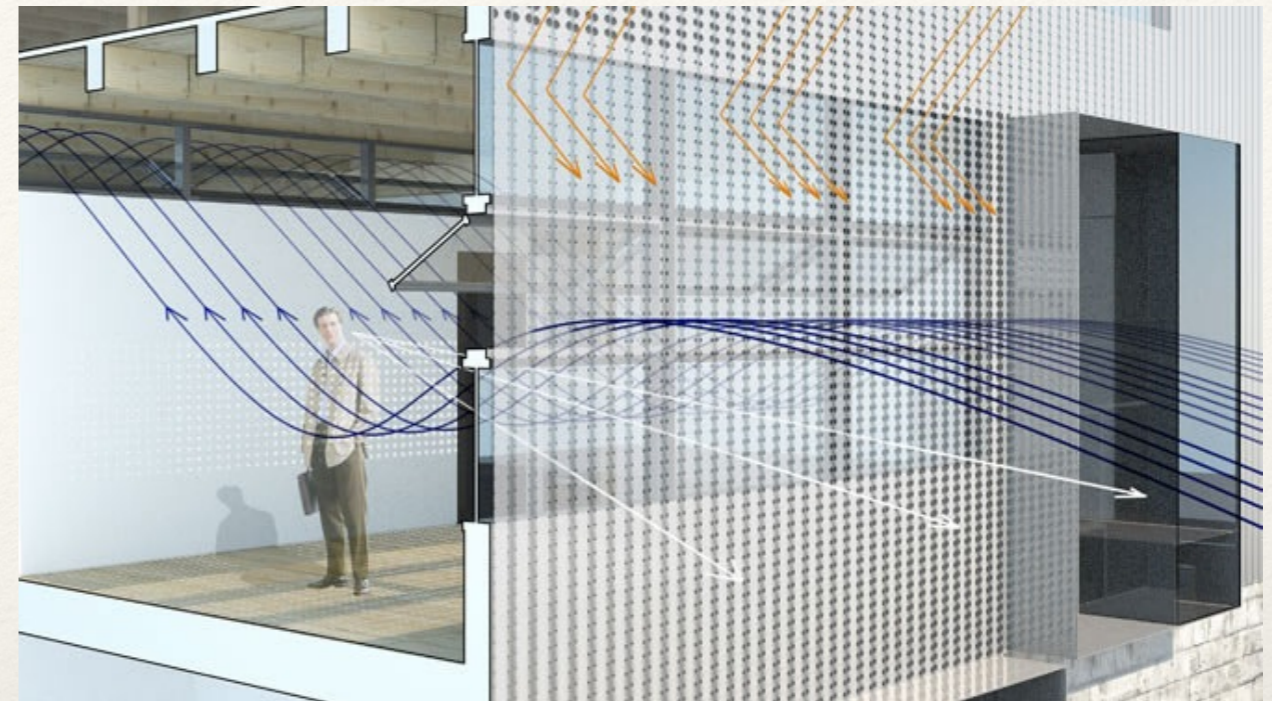
- Maintaining Historic Character
- Mitigates solar heat gain
- Cross ventilation for interior
- Offering views for occupants along with privacy
- Custom CNC milling pattern
 - ❖ Opaque - 50% open



- 1 RENEWABLE ENERGY > 30kW solar array produces 70% of the building's electricity
- 2 NATURAL VENTILATION > operable windows & skylights allow passive cooling
- 3 ADAPTIVE RE-USE > original timber frame and concrete structure have been reused
- 4 LIVING ROOF > insulates building, filters stormwater, drought-resistant native plant species require no irrigation
- 5 BREATHABLE SKIN > perforated facade reduces solar gain while enabling natural ventilation
- 6 BAMBOO FLOORS > technically a grass, bamboo is a rapidly renewable resource
- 7 PERVIOUS PAVERS > micro-perforations reduce runoff while light color helps reflect heat
- 8 GRASS PAVERS > 50% planted area reduces runoff, lowers surface temperature and is drivable
- 9 FSC CERTIFIED WOOD > over 50% of all wood products used are FSC certified
- 10 VEGETATED AREAS > 20% of site has been restored with drought-resistant native vegetation that require no irrigation
- 11 REUSED/RECLAIMED WOOD > wood reclaimed from the existing structure or nearby sources is reused as interior finishes & furniture
- 12 HIGH-ALBEDO ROOF > reflects heat, reduces cooling loads, mitigates urban heat-island effect
- 13 CONCRETE > 20% fly ash used instead of Portland cement
- 14 RECYCLED STEEL > 50% of all steel used in the project is recycled
- 15 WORKSTATIONS > workstations & task chairs have MBDC gold or silver level Cradle-to-Cradle certification

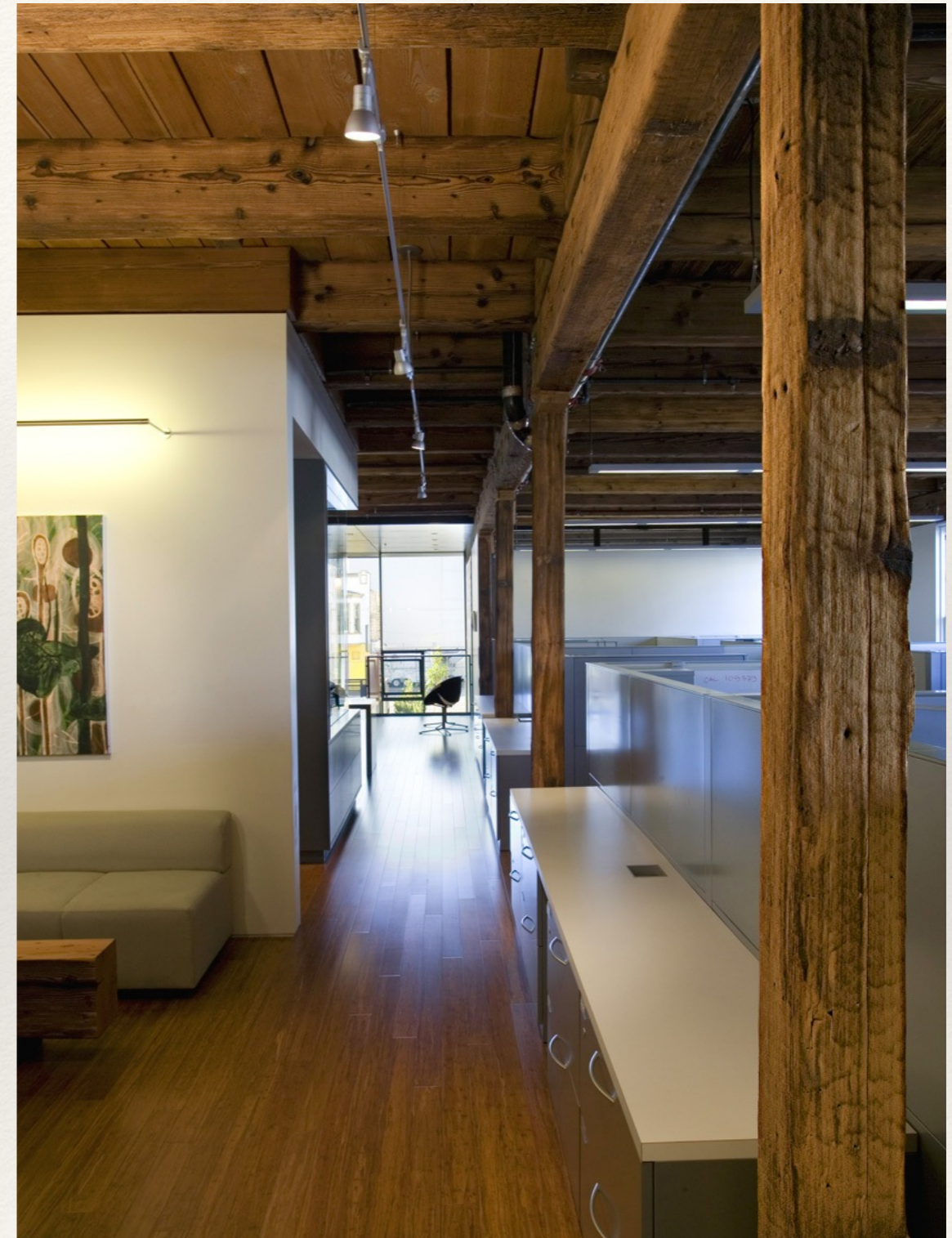
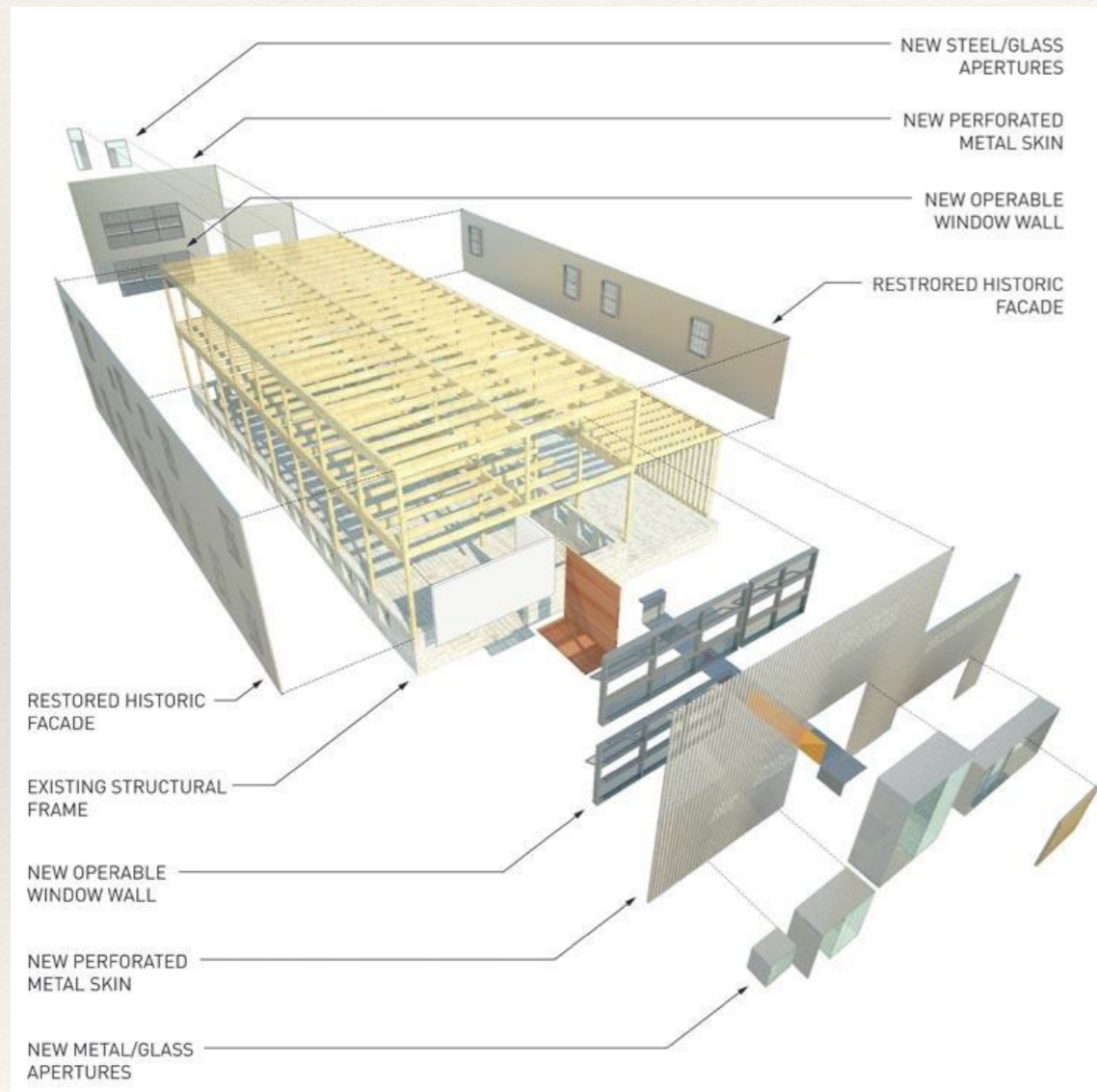


SUSTAINABLE STRATEGIES



Materials

- 80% of the existing walls, floors, roof reused
- 50% wood used is FSC Certified
- 100% naturally ventilated and passively cooled
- Existing structural frame seismically reinforced



Energy

- All unshaded rood area supports PV Panels
- Daylight sensors
- Energy efficient fixtures
- In floor radiant heating
- Solar energy equates 38% of annual electricity use



Results

Design goal:

79% above code

2011 Results*

25,440 kWh -Electricity

26,267 kWh - Renewed Energy

103.3% Energy Generated on site

94% more efficient than code

40% increase in occupation

*Offices Alone:

Total EUI (kBtu/sf/yr) Used by Offices: 10

Total Energy Used by Offices: 25,440 kWh

Net EUI (kBtu/sf/yr) Used by Offices: 1

Net Purchased Energy Used by Offices: (827) kWh uses less than generates

Restaurant Alone:

Total EUI (kBtu/sf/yr) Used by Restaurant: 133.8

Total Energy Used by Restaurant: 190,494 kWh

Net EUI (kBtu/sf/yr) Used by Restaurant: 124.5

Net Purchased Energy Used by Restaurant: 177,360 kWh







Sources:

<http://www.buildinggreen.com/hpb/overview.cfm?ProjectID=1704>

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<http://www.millercomp.com>

<http://www.archdaily.com/468061/355-11th-street-aidlindarling-design/>

<http://www.aiatopten.org/node/241>

