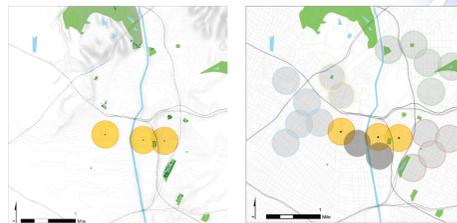


# Tectonics

California's tectonic plates continually undergo metamorphic processes to create enviably vibrant landscapes. "Tectonics" accretes disparate fragments of Los Angeles' neighborhoods, cultures, and habitats into a striking new epicenter of urban surfaces and rich veins of connectivity.

Situated at the physical and hydrologic heart of Los Angeles, "Tectonics" creates critical linkages between isolated neighborhoods and habitats. Existing conditions reflect a dearth of green space and of community connectivity, spurring growth within quarter-mile-radius neighborhood units becomes the focal point of this analysis.

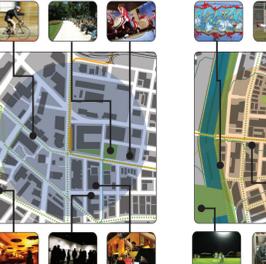


## The Mesa

A decked park over the MetroLink rail yard marks an important urban epicenter reverberating with the Arts District to Downtown, and east to nearby residential neighborhoods. Bridging the fault line of the LA River, The Mesa links the grand sculptural scale of Downtown, the LA River channel with its massive infrastructure, and the Industrial District, with the fine-grained community functions serving the Boyle Heights and Pico-Aliso neighborhoods. Shifting planes bring local families, gardeners, bird-watchers, artists, athletes, and tourists together in a rich conglomerate that strengthens the identity of the surrounding neighborhoods.

## Celebrate Neighborhood Character

Little Tokyo connects Downtown's Grand Avenue project to the River Greenway. Little Tokyo Park becomes a tourist amenity, a lunch break spot for local DWP workers, a dog-walking and recreation park for local residents, and a transit stop vista.



Demographic	Little Tokyo	Pico-Aliso	Mariachi Plaza
Population	1,200	1,500	1,800
Median Age	45	40	35
Male	50%	50%	50%
Female	50%	50%	50%
Households	500	600	700
Average Size	2.4	2.5	2.6
Population Density	120/sq ft	150/sq ft	180/sq ft



## Master Plan Phasing



## Eventual Development Typologies Around Stations

**Little Tokyo TOD**  
Serves dense urban village with a variety of rental and ownership housing options for singles, small families, and empty nesters. Transitional housing should be located near transit and provide access to services.

**Pico-Aliso TOD**  
Medium-density neighborhood core with ownership and rental housing for families, particularly those with small children. Some senior housing, but less emphasis on transitional than downtown.

**Mariachi Plaza TOD**  
Medium-to low-density neighborhood core emphasizing housing for larger families and served by a fine-grained community retail area. Some multi-unit apartment or condos for professionals at White Memorial Medical Center.



**Benefits of Green Roofs:**

- Increases stormwater retention by 25-40% in winter, 70-90% in summer
- Increases property value by 6-13%
- Removes particulate matter (PM) and CO2 from the air
- Reduces building HVAC needs by 20% and reduces heat gain by 30%
- Reduces noise pollution. An 8" green roof lowers incoming sound by up to 50 decibels.

**Green Roof Calculations:**

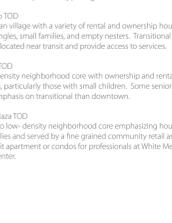
A 5,000 square foot green roof atop Little Tokyo's Savoy apartments could collect and store 390,000 gallons of rainfall annually. This could provide approximately 70% of the water needs of the building annually, saving \$1,700/yr.

**Green Roof Costs:**

Green Roof (grass) \$150/sq ft  
 Roof-Ready \$100/sq ft  
 Permeable Paving \$200/sq ft  
 Bioretention Basin (Residential) \$250/sq ft  
 Wetland/Stormwater \$300/sq ft

## Living Machine Specifications

Serve picnic barbecue area, playing fields & courts, and outdoor classroom. Design flow of 2,400 gpd treats wastewater of up to 450 visitors/day, soccer tournaments, concerts, 5000' of greenhouse houses, anaerobic digesters, aerated vegetation tanks, clarifiers, treatment marshes, and chlorine contact basins. Treated water is recycled in toilets and irrigation system.



**Anaerobic Digestion:**

Anaerobic digestion tanks (500 gal each, 5' dia residence, acid-forming and methane producing bacteria break down carbon molecules and produce methane. Methane cogeneration powers the Living Machine circulation and aeration pumps, supplemented by solar panels on-site.

**Aerated Vegetation Tanks:**

Aerated Vegetation Tanks (2 parallel sets of 5 aerated vegetated tanks 1500 gal each, 5' dia residence, plants convert ammonium and organic nitrogen to nitrate. Floating plant palette: duckweed (Lemna minor), azolla (Azolla filiculoides), water hyacinth (Pistia stratiotes), and water lettuce (Wolffia sp.).

**Clarifiers:**

Clarifiers (2 clarifier setting tanks 500 gal each, 1 day residence, effluent settles, sludge is solar panel pumped back to anaerobic digester; raw is pumped into marshes).

**Treatment Marshes:**

Treatment Marshes (2 shallow vegetated marshes 60x30 ft each, 4 day residence, lined with crushed limestone, sequesters inorganic nitrogen and reduces BOD/TS). Open water fosters *Bombus affinis* for mosquito control. Emergent vegetation palette: iris, vesicaria, *Colocasia esculenta*, *Typha latifolia*, *Canna americana*, *Cyperus alternifolius*, *Cyperus hagenii*, and *Lythrum repens*. Mosquitoes are controlled by eliminating stagnant open water.

**Chlorine Contact Tank:**

Chlorine Contact Tank (1 chlorine contact tank 500 gal). The residence time, chlorinated with sulfur dioxide before returning to Visitor's Center toilets for re-use.

## Future Bird Habitat

Bellet Kingfisher: Running water, not overgrown ditches, earthen banks, needs fish, good water quality.

Belt's Vireo: dense riparian vegetation, endangered indicator species.

Shearwater: 10' diameter gravel <2ft depth, clear pool flow (1-70% vegetated cover).

Red-Legged Frog: permanent riparian habitat, deep pools (30cm depth), dense vegetation (cattail, bulrush).



**Bioretention Basins:**

Bioretention Basins (18' dia, 18" deep, 18' dia, 18" deep, 18' dia, 18" deep). They filter stormwater runoff and improve water quality.

**Community Garden Beds:**

Community Garden Beds (10' x 10' beds, 10' x 10' beds, 10' x 10' beds). They provide fresh produce and community space.

**Summary Metrics:**

Summary Metrics: A table showing key performance indicators for the project, including water reuse, green roof area, and community benefits.

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## Land Use Classifications



**Commercial:** Retail, office, and service buildings.

**Industrial:** Manufacturing and warehouse facilities.

**Mixed-Use:** Residential and commercial buildings.

**Public Facility:** Schools, libraries, and community centers.

**Residential:** Single-family and multi-family housing.

**Open Space:** Parks, green roofs, and green streets.

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## Paradiso Blanco Apartments

Paradiso Blanco is a mixed-use project that provides ownership and rental housing with retail amenities at the intersection of the Downtown LA area and the River Greenway. The project includes a mix of residential units, retail space, and community amenities.



**Paradiso Blanco Condominiums:**

Paradiso Blanco Condominiums are designed to attract homebuyers who desire high-quality affordable housing with easy access to transit. It is located at the intersection of the Downtown LA area and the River Greenway.

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## Paradiso Blanco Apartments & Retail

Paradiso Blanco Apartments & Retail: A table showing the financial performance of the project, including revenue, expenses, and profit.

Category	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Revenue	\$1,200,000	\$1,500,000	\$1,800,000	\$2,100,000	\$2,400,000	\$2,700,000	\$3,000,000	\$3,300,000	\$3,600,000	\$3,900,000	\$4,200,000	\$4,500,000
Expenses	\$800,000	\$1,000,000	\$1,200,000	\$1,400,000	\$1,600,000	\$1,800,000	\$2,000,000	\$2,200,000	\$2,400,000	\$2,600,000	\$2,800,000	\$3,000,000
Profit	\$400,000	\$500,000	\$600,000	\$700,000	\$800,000	\$900,000	\$1,000,000	\$1,100,000	\$1,200,000	\$1,300,000	\$1,400,000	\$1,500,000

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## East 1st Street Beyond Alameda Street



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## Little Tokyo & Pico-Aliso Metro Station Areas



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