



Foothill Gold Line

Arcadia • Monrovia • Duarte • Irwindale • Azusa

Pasadena to Azusa

Operations Campus Newsletter

Special Edition - May 23, 2015

Welcome to the Foothill Gold Line Operations Campus

After nearly four years of design and construction on the Foothill Gold Line light rail project from Pasadena to Azusa, the 24-acre, \$265 million Operations Campus is complete, three months ahead of schedule.

The Foothill Gold Line Operations Campus is part of the six station, 11.5-mile Foothill Gold Line light rail project from Pasadena to Azusa. The 24-acre, \$265 million Foothill Gold Line Operations Campus in Monrovia will be completed and turned over to the Los Angeles County Metropolitan Transportation Authority (Metro) in June 2015 so they can begin commissioning trains to the facility in advance of the full light rail project's completion in late-September 2015.

The Foothill Gold Line Operations Campus is a full-service, state of the art facility. It has the capacity to house and maintain up to 84 light rail vehicles and nearly 200 maintenance and operations staff over several shifts each day. The facility will operate 24 hours a day, 7 days a week.



In addition to offices and training facilities, the Campus provides full-service maintenance capabilities for light rail vehicles.



Full-service maintenance for light rail vehicles will include: inspection, heavy repairs, blow-down, wheel truing, body repairs, painting, storage, cleaning and washing. Six miles of track was installed on the Campus, much of which is located in the storage yard that makes up more than a third of the 24-acre site.

More than 500,000 work hours were spent in design and construction of the Operations Campus over the last four years. The Foothill Gold Line Construction Authority is responsible for the project, and hired the design-build team of Kiewit and Parsons. Calling themselves "Foothill Transit Constructors," the Kiewit-Parsons Joint Venture brought on hundreds of engineers, architects, construction

The Operations Campus will house up to 84 light rail vehicles and 200 operations and maintenance staff.

managers, electricians, carpenters, iron workers, operators, and laborers to get the job done. Importantly, during all of that time, there was only one safety incident during construction of the Operations Campus, a safety record far superior to the industry average for this type of construction.

"The first Spanish explorers sailing the coast of California in the eighteenth century called the region 'a land of fire,' noting the deep orange-colored hillsides. It was only after the ships landed that it became clear that poppies were the source of the golden color, giving California its state flower and motto - The Golden State."

- Artist, Christie Beniston on the art overlay theme for the Campus – the California Poppy (see page 4 for more details)



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Designed to the Gold Standard of Sustainability

The Foothill Gold Line Operations Campus is one of the only of its kind to be designed and built to meet U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Gold standards, one of the highest levels of recognition available.



A solar panel array atop the Maintenance of Way canopy will provide nearly 33% of power needed for the 132,000 square foot Main Shop Building.

Water-saving features were designed into the Foothill Gold Line Operations Campus. The 9,000 square foot Car Wash Facility, which will use an average of 60,000 gallons of water daily, will use only recycled, reclaimed water. The Main Shop Building will reduce water consumption by 35% through the use of high efficiency fixtures and infrared sensor faucets that dispense less water. A variety of drought-tolerant plants were planted throughout the Campus and smart sprinkler technology installed, which senses the amount of water needed and adjusts to weather conditions. Landscape water consumption will be reduced

by 50%.

The Operations Campus will also reduce energy consumption. It is home to a 178.5-kilowatt solar panel array, which will produce 22,000 kilowatt hours of electricity each month; producing enough to provide the 132,000 square foot Main Shop Building with about a third of its power needs. If not immediately

utilized on-site, the power generated by the solar array at the Operations Campus will be made available to the local electric grid, to help power nearby homes and buildings.

The Main Shop Building also has state-of-the-art lighting that brighten or turn on when people are nearby, and skylights that track the sun to optimize natural sunlight as much of the day as possible. Together with other features, the building is projected to achieve 32.5% energy performance over a typical building of its kind.

Additionally, building materials and practices for the Operations Campus were



Using cranes, workers placed 714 individual solar panels that will create nearly 22,000 kilowatt hours per month of electricity.

selected to be sustainable, long-lasting, and environmentally-friendly. Nearly 50% of the materials used in the construction of the Operations Campus are comprised of recycled materials, including 100% of steel used to build the nearly six miles of light rail track. All of the track ballast, aggregate and concrete were locally sourced to reduce the environmental impact of transporting materials long distances. Further, the majority of materials and packaging disposed during construction were diverted away from the landfills to be repurposed and recycled.



Drought tolerant plants are planted throughout the Campus to allow natural collection of rain water.



Most of the nearly six miles of track installed at the Campus will be used for storage of up to 84 light rail vehicles when not in use.

Solar panels will generate nearly 22,000 kilowatt hours - enough to power 24 homes

Recycled, reclaimed water will be used to wash light rail cars

Main Shop Building will reduce water consumption by 35%

Smart sprinkler technology will reduce landscape watering by 50%

More than 1/3 of facility is permeable, allowing water to infiltrate into the groundwater

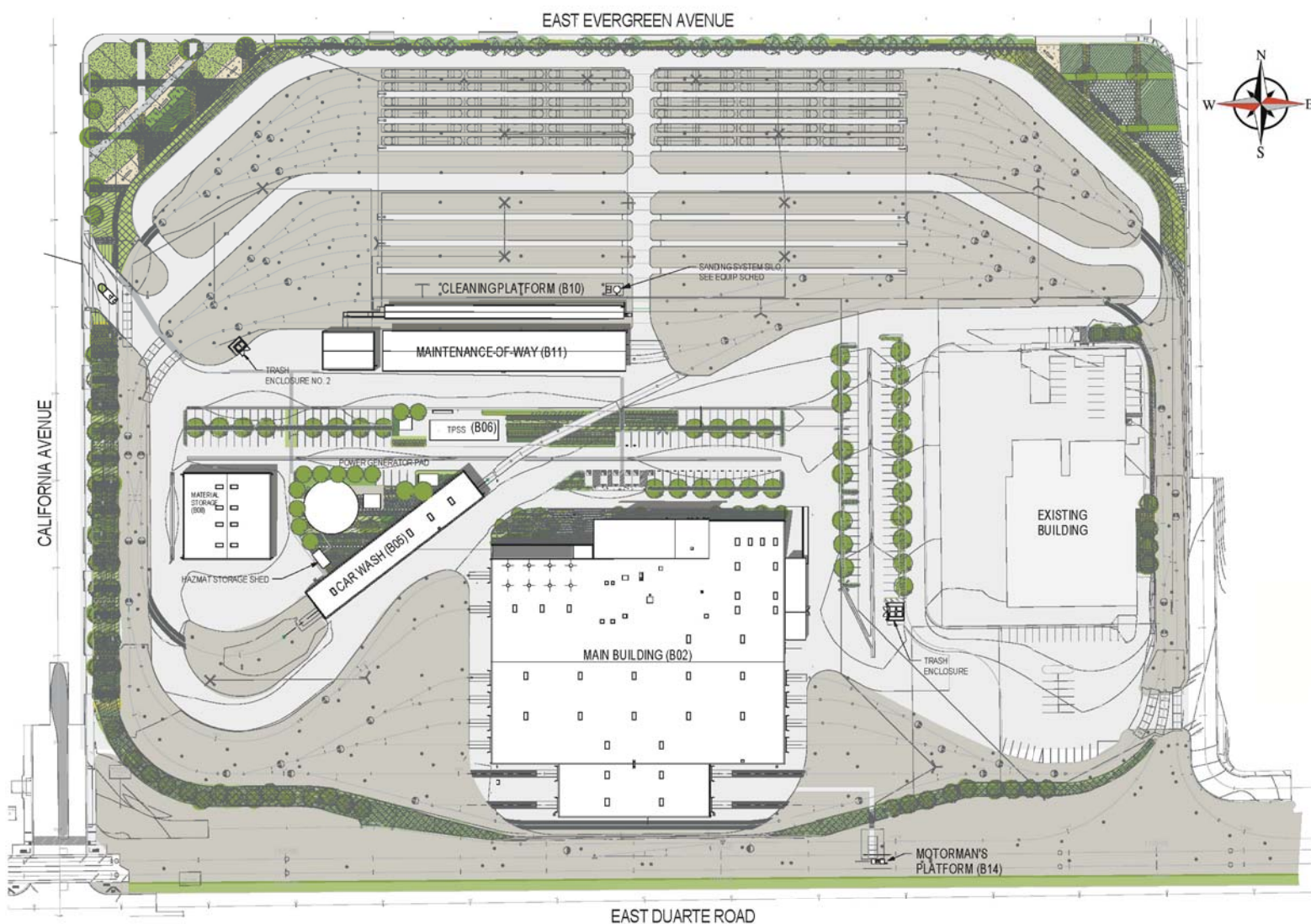
Operations Campus Layout

Bounded by E. Evergreen Avenue to the north, E. Duarte Road on the south, California Avenue to the west and Shamrock Avenue to the east in the City of Monrovia, the Foothill Gold Line Operations Campus includes the three-story Main Shop Building, which contains offices, training and locker rooms for operations and maintenance personnel. Daily, the light rail cars will park on either side of the Car Cleaning Platform where the interiors of the vehicles will be cleaned and then head to the 9,000 square foot Car Wash facility where the exterior of the cars will be washed. The drying blower equipment is enclosed within the car wash to reduce the noise for the facility's residential neighbors. Cars will be washed with recycled, reclaimed water rather than fresh water.

Other buildings include the Maintenance of Way (MOW) storage facility to store right-of-way maintenance equipment and vehicles used in servicing the miles of track and equipment used in the county's light rail system. The canopy of the MOW storage facility is home to the 714-solar panel array. The Material Storage Building will store replacement parts and other materials needed at the facility in high-bay pallet storage racks.

Approximately six miles of track were installed on the campus for storing light rail vehicles when not in use or when undergoing maintenance.

Once the Campus is in full swing, those interested in viewing the operations can do so from the new public viewing plaza at the southeast corner of Evergreen Avenue and California Avenue. The landscaped plaza, complete with benches, ornamental concrete and custom fencing designed by Southern California artist Christie Beniston, affords the opportunity to sit and watch train activity and provides the site's residential neighbors a beautiful corner to enjoy.



Capturing Stormwater

The Campus contains a comprehensive stormwater management system, which will capture the first 3/4-inch (112,000 gallons) of rainwater. The system utilizes an elaborate drainage structure that will capture all site and roof drainage and send it through a Cyclonic Debris Removal System (CDS) that separates and removes contaminants. Once filtered, the water travels to large subterranean chambers built below the Operations Campus with open bottoms that will allow the water to infiltrate into the groundwater aquifers below at a measured rate. Typically, rainwater goes directly into the county storm drains and is sent to the ocean. This system will allow the water to be captured and returned to the groundwater aquifers.

In the event rainfall doesn't reach the on-site drain system, the rain will directly infiltrate through the permeable or porous ballast and landscape areas that make up the majority of the site, directly infiltrating into the soil below.

Did you know? ***During drought years, groundwater makes up to 46% or more of California's freshwater supply?***



The stormwater management system captures the first 112,000 gallons of rain water; removes contaminants before traveling to subterranean chambers that will slowly release water into the groundwater aquifer.

Campus Art Overlay



An 11-foot wide by 13-foot high mosaic mural adorns the interior wall of the Main Shop Building lobby.

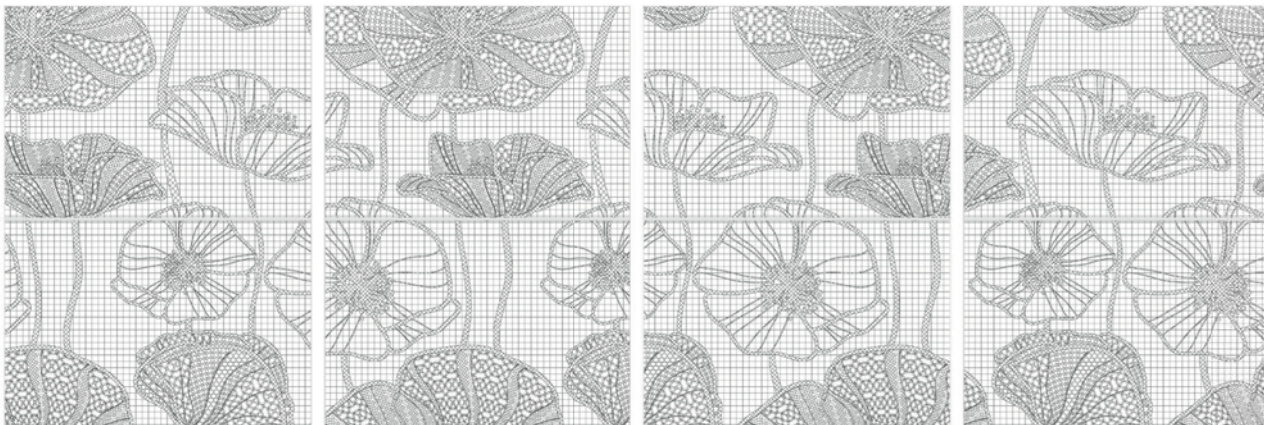
The Foothill Gold Line Operations Campus art overlay is inspired by the California Poppy. "Poppy-orange" can be seen on several major structures at the facility and is also present in the flowering drought-tolerant groundcover planted within and around the facility.

Additionally, Southern California artist Christie Beniston used the California Poppy theme for two art elements installed at the Operations Campus: (1) a signature 140,000 glass tile mosaic installed in the Main Shop Building lobby, and (2) a 96-foot long custom artistic, lace fence installed at Evergreen Plaza (the public viewing plaza built at the northwest corner of the Campus).

Here is what the artist said about the inspirational state flower:

"The first Spanish explorers sailing the coast of California in the eighteenth century called the region "a land of fire," noting the deep orange-colored hillsides. It was only after the ships landed that it became clear that poppies were the source of the golden color, giving California its state flower and motto, The Golden State."

– Artist Statement, Christie Beniston



A custom-designed "Poppy" themed mesh fence is located at the Evergreen Plaza viewing area on the northwest corner of the Campus. One can sit and watch the Campus operations from the Plaza.

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