



CONSTRUCTION NEWS

Foothill Gold Line *Glendora to Pomona*

Fall 2022

Construction Update

The Glendora to Pomona Segment is More Than Halfway Complete

The Glendora to Pomona project segment, which started major construction in July 2020, has already expended more than 1.1 million hours of work and is now more than 50% complete. And despite working through the pandemic, the team is on schedule to complete the project to Pomona in early 2025.

Project Completion by %



To date, the team has finished all project design, relocated the freight track that originally sat in the middle of the rail corridor, completed construction of the freight bridges, and is more than 90% done with reconstruction of the 21

at-grade street crossings. Crews are now focused on building the light rail system. Work is actively underway on the four new light rail stations and the light rail bridges, as well as on installation of the light rail track, electrical and communication systems.

Getting to this point took a tremendous effort. Crews have moved, poured and installed a seriously impressive amount of material. Here are just some of the numbers from the project so far:

- Nearly 400,000 cubic yards of earth has been moved - equivalent to 38,000 dump truck loads (although most of the earth was reused on the project and stayed within the corridor)
- About 30,000 cubic yards of concrete has been poured - equivalent to the amount needed to fill 225 backyard swimming pools)

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- More than 85,000 linear feet of rail has been installed - enough to reach the Rose Bowl from Glendora
- More than 450,000 linear feet of conduit has been installed - enough to reach Palm Springs from Glendora
- More than 180,000 square feet of retaining walls have been built - enough to cover 40 basketball courts
- About 3.4 million pounds of rebar have been used - the weight of 226 school buses (empty)/168 school buses (full)



The intersection of Bonita Ave. & Cataract Ave. freshly paved and reopened in mid-August after a two month full intersection closure.

Getting to this point also took the partnership and support of the corridor cities, and the patience of our project neighbors and the communities the project bisects as major construction was underway these past two years. The team at the Construction Authority and KPJV truly thank the community for their continued understanding and patience as we build this regional infrastructure project.

Attention to Detail Brings Design to 10 miles of Project Walls

With more than 27,000 linear feet of sound walls and 24,000 linear feet of retaining walls planned between Glendora and Pomona, the Construction Authority decided early on that adding design to the wall panels could benefit the overall look of the project and make a big difference on how the light rail line would visually fit within the built environment.

So, in 2017, the Construction Authority hired Southern California-based artist, Christie Beniston, as a design consultant to help envision a motif for those elements of the project that were to be built within all four cities and along the entire 9.1-mile alignment. The 10 miles of walls were an important project element for Christie to imagine.

(Continued on Page 2)

KIEWIT-PARSONS, A JV

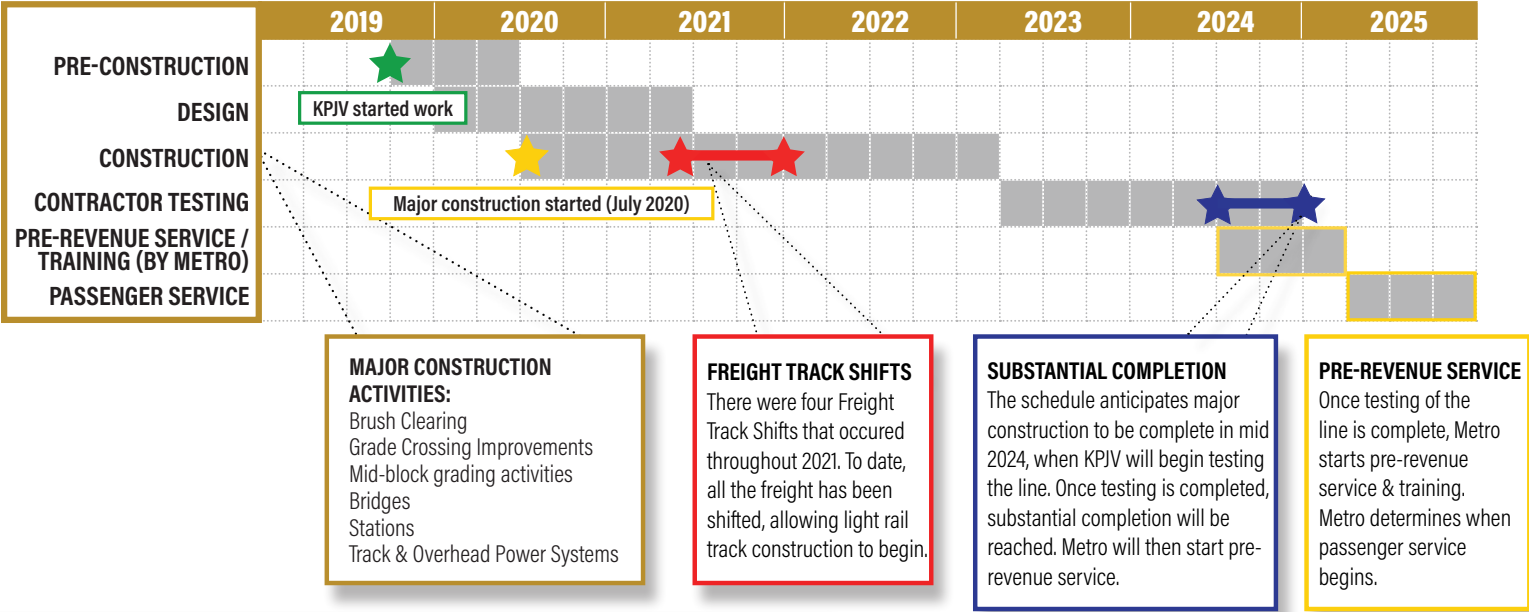


Foothill Gold Line

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Foothill Gold Line Glendora to Pomona - Project Schedule



Construction Update (continued)



Soundwall installation in the City of La Verne, between Wheeler Ave. and A St.

Christie began her work by doing research on the area and developed several central themes that are relevant to the region. In the end, all of the patterns developed for the alignment art are based on abstracted images of citrus. The pre-cast concrete panels that are 5 feet by 5 feet in size are used for the sound and retaining walls, were inspired by enlarged imagery of an orange slice. The depth of the relief on the panels creates interesting shadow casting at various times of day. The visual changes to the surface patterns reflect the passage of time, the movement of the sun and the movement of the train.

Beniston states, “As a public artist I was brought in at an early stage to work collaboratively with a wonderful team. It was an efficient way to work both aesthetically and from a financial point of view to fully integrate unusual design components into the project. For example, we created a ‘kit of parts’ that became a 3 foot by 18 foot drawing which - when rolled out - spanned the length of the giant conference room table we would meet around. Having a

‘kit of parts’ enabled us to create a holistic design for the entire alignment. To create dynamic, visually compelling public spaces, we focused on repetitive elements in the design that would create rhythm.”

Christie’s designs were integrated into the design plans for the project before the KPIV team was hired, so KPIV took the baton from Christie and finalized the plans to build and install the panels and meet the vision that Christie and the Construction Authority had created. Realizing the vision required making special form liners for the different designed concrete wall panels, and then having an expert-skilled structures team available to install the panels at different locations with different conditions throughout the corridor to create a unified look all along the project alignment.

You can see the result of this collaboration starting to take shape along the corridor today. Shown below are the drawings and a photo of the designs that Christie developed. The photo (above) is an example of where that design has been constructed and installed.



Citrus Motif
Concept Image



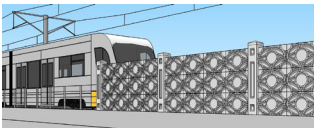
Sample Study
For Retaining Wall Pattern



Citrus Pith
Concept Image



Retaining Wall Elevation
5' x 5' Concrete Panels



Soundwall Pattern
(Concrete Post and Panel)



Soundwall Elevation

Left: Retaining wall concept and panels Above: Soundwall patterns and elevation

Construction Within Mid-Blocks

Light Rail Track and Overhead Catenary Systems

Once all of the at-grade crossings and bridge structures are completed late this year, most of the project's impact to the travelling public will be diminished. That is because construction will be mostly out of the public right of way and work will be focused within the "mid-blocks" (or between streets).

Mid-block work will begin to focus on completing installation of the light rail tracks, Overhead Catenary System (OCS), underground cable installation, and continuing work at the stations and parking facilities.

Light rail track construction will continue through 2023, and is an extensive process within itself.

The overall track work is completed in layers and includes underground drainage, duct bank installation and grading; followed by the placement and compaction of ballast rock. Once the underground work is complete, concrete ties are set (six at a time), and rail is typically laid in 880-foot sections and welded together to become one seamless piece. The rail is then clipped to stay in place atop the ties, and then flooded with ballast rock. The next step is to regulate the ballast and surface the rail using a tamping machine to place the track precisely at its final alignment and grade. The last step in the process is to final dress the ballast using a regulator machine so it is neatly graded around the concrete ties and properly sloped away from the track.

The OCS installation will begin next year, and is how power is supplied to the light rail trains. The OCS system consists of OCS poles and cantilevers, aerial messenger and contact wires, and the installation of 8 Traction Power Substations (with a substation installed generally every 1 to 1½ miles from one another, where power received from the utility company is changed to the type used to power the light rail systems. The OCS installation is being managed and performed by Kiewit's subsidiary Mass Electric Construction Company, a recognized leader in transit and rail systems installation.

Want to learn more? Watch for a video release this month by the Construction Authority on building the light rail system.



Mass Electric Construction Company crews installing the Traction Power Substation (TPSS) on Lone Hill Ave., south of the 210 Freeway.



This rail tie handling machine referred to as a "Tie Dragon" places the 600 lbs. concrete rail ties – six at a time – making for a quicker and accurate installation.



Mass Electric Construction Company crews working to set the OCS foundations on the east side of the Glendora Ave. crossing in Glendora.

Safety Corner



At KPJV, "Crew of the Month" awards are given to top crews which have displayed exceptional safety efforts in their everyday work tasks. Identifying safety risks and being able to effectively mitigate those risks are key factors to staying safe during construction. Three key factors that Crew of the Month award winners have been recognized for are:

- 1) Ensuring a safety plan is in place and is being followed throughout the work day;
- 2) Speaking up when unsafe behaviors or conditions are recognized; and
- 3) Holding each other accountable for their own safety each day.

Making safety personal is part of the KPJV culture and employees are encouraged to apply these values in their daily lives even beyond the project gates.

Pictured to the left are two of our hard-working crews that were recently recognized with the Safety Crew of the Month award. Thank you to all our crews, superintendents, engineers and managers for not just putting "Safety First," but for practicing "Safety Always".



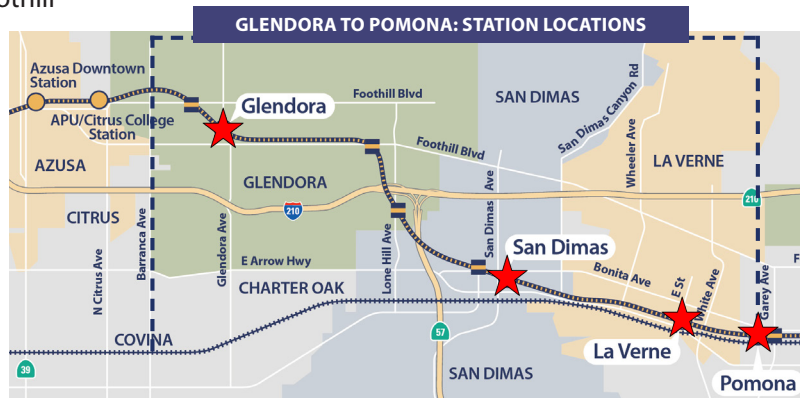
Foothill Gold Line Glendora to Pomona

Four Cities; Four Stations

Four new light rail stations are under construction along the Foothill Gold Line from Glendora to Pomona. Each will have parking, and all will be turned over to Metro in early 2025 for pre-revenue operations. Metro will decide when the line (and stations) opens for passenger service.

For ease of use, each station is designed as a center platform station, with light rail tracks on either side (one for westbound and one for eastbound trains). Each will feature station artwork created by a city-selected artist or artist team and an associated parking facility, with charging stations for EVs, bicycle parking and bus and drop-off areas. At the Pomona Station, riders will be able to transfer between the Metro and Metrolink systems.

Station construction started from west to east, so the Glendora Station is farthest along and the Pomona Station construction is just getting started (see photos below).



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