



# Foothill Gold Line

Arcadia • Monrovia • Duarte • Irwindale • Azusa

*Pasadena to Azusa*

## NEWSLETTER

2014 – THIRD QUARTER

### Construction Update

#### Significant Construction Progress from Pasadena to Azusa – Now 75% Complete!

Now that the Foothill Gold Line light rail project from Pasadena to Azusa is 75% complete, many important project milestones are being reached.

In the last quarter alone, every bridge, retaining wall, and station platform has “topped-out,” meaning that all final structural concrete pours have been finished; and all underground utility improvements and relocations were completed. Five stations now have canopies in place and some even have roof tiles and platform pavers installed. Irwindale is the last station to receive its canopies; which will take place in September. Artwork for each of the stations is also nearing completion at off-site studios in Southern California

and around the country, and installation will begin later this year.

Currently, only one of two dozen bridge structures for the project is left to be finished. Construction of the railroad bridge over the Huntington Drive and Second Ave intersection in Arcadia is in progress and will be completed in the next few weeks, allowing crews to begin installing the track and system elements across the bridge. Additionally, the final at-grade (street-level) crossing for the project is also nearing completion. During the last few months, several crossings have been completed in Monrovia and Azusa, leaving the work at Mountain Ave as the final crossing to be completed for the project. Importantly, the first phase of work at Mountain Ave was completed in August, two months ahead of schedule. The second phase of work will be finished by the end of 2014, and include a total realignment of the intersection of Mountain Ave and Duarte Rd for improved visibility.

Light rail installation is underway along the 11.5-mile corridor and we anticipate completion of the light rail track installation in October, just a few short months from now. In Monrovia, the 24-acre Operation Campus is quickly being finished. The \$265 million facility is on schedule to be turned over to Metro in March 2015; in time for Metro to train personnel and get familiar with the equipment prior to testing the line. In fact, before we know it, crews will be focused on the important final steps of the project – integrating the safety and communications system and testing.

Substantial completion of the entire project is still on schedule for late September 2015, when the project as a whole will be turned over to Metro for testing and pre-revenue service. Metro will decide when the line opens for passenger service to the public.

#### Station Canopy Installation



Approximately 50% of each light rail platform will be covered by a canopy. Here, crews are installing the roof of the canopy at the Duarte / City of Hope station.

#### Freight Track Cut-Over



In June 2014, track crews successfully cut-over the active freight train service to the last section of relocated freight tracks shown here over the newly built freight bridge above Foothill Blvd in Azusa.

#### Operations Campus



The three-story main shop building will house administrative offices and facilities for the future train operators in the upper levels, and a full service shop on the ground floor.

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Foothill Gold Line - Pasadena to Azusa Project Schedule

	2014												2015											
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Construction																								
Post-Construction																								

Construction is anticipated to be complete in September 2015 and the project will be turned over to Metro, who then determines when passenger service begins, currently scheduled for March 2016.

## Construction within the Mid-blocks

### Light Rail Track and Overhead Catenary Systems

Once all of the at-grade crossings and bridge structures are completed a few short months from now, most of the project’s impact to the travelling public will be diminished. That is because we 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 over the next several months will focus on completing installation of the light rail tracks, Overhead Catenary System, underground cable installation, and continuing work at the station platforms and parking facilities.

Light rail track construction will continue through October 2014, 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 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 is also underway, which 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 ten Traction Power Substations (with a substation installed generally every 1 to 1½-miles from one another). 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.



Mass Electric Construction Company crews installing the messenger wire atop Overhead Catenary System cantilevers and poles.



This 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.



At the San Gabriel River Bridge in Irwindale, the track is directly fixed to the concrete foundations. This eliminates the need for concrete rail ties and ballast rock, considerably reducing the overall weight on this 700-linear foot bridge.

## Safety Corner

At Foothill Transit Constructors, “Safety 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 Safety 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 company 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.”





## Building Safe Grade Crossings

### State of the Art Equipment and Safety Engineering Incorporated into Each Street-level Grade Crossing

With more than a dozen locations along the project where the light rail system will cross public streets, it is critical that each is built with safety in mind for future rail passengers as well as the traveling public that needs to cross the tracks to get to their home, school, work, etc.

These crossings are referred to as “at-grade” or street level, and are designed, approved and regulated by the California Public Utilities Commission (CPUC). For the Foothill Gold Line project, we have engineered these crossings with the latest safety equipment and designs. The current project’s crossings are being designed similarly to the initial segment of the Gold Line, which has been operational for more than 11 years and continues to be one of the safest light rail systems in the country. Each crossing will contain four-quadrant gate crossing arms to prevent drivers from entering the crossing when a train is approaching, pedestrian gate arms to halt pedestrians from entering a crossing at the sidewalk, signage, flashing lights and ringing bells to alert the public of an approaching train.

A supplemental safety feature added at certain crossings is the installation of concrete curbed medians, and the addition of red curb area within 100 feet of the crossing. The purpose of the added concrete curbed medians is to prevent certain turn movements (mostly left turns) by motorists near the crossing and ultimately eliminate vehicles from being forced to stop on the railroad tracks while waiting for another vehicle to complete a turn. You will notice these new medians at various crossing along the corridor as well as the added signage for restricted turn movements.

Similar to the four quadrant gate crossing arms used to keep motorists safe at a crossing, pedestrian gate arms are integrated as well at the crossings to actively halt pedestrians and cyclists from entering a crossing when a train is approaching. The pedestrian gate arms will be lowered to the horizontal position when a train is approaching and lifted again when it is safe for pedestrians and cyclist to cross at the sidewalks.

Recently, the CPUC has approved a request by the Construction Authority to allow the bells to stop ringing at crossings near homes once the quadrant gates are down, in their full horizontal position. The CPUC also agreed to the installation of shrouds (or covers) over the bells at these crossings to direct the bell noise down to the intersection. Both of these measures were put in place at crossings within the first segment of the Gold Line and have proven to not only be safe, but also help reduce noise for residential neighbors of the light rail line.

#### [Video: Designing Safe Crossings](#)

Want to learn more about the safety features designed for the street level crossings? The Construction Authority has put together an informative video about the history, design and engineering incorporated into each of the street-level crossings along this project that can be found online at [www.foothillgoldline.org/news/videos](http://www.foothillgoldline.org/news/videos) and by clicking on the Designing Safe Crossings Video at the bottom of the page.



*Photo of a four-quadrant gate crossing. Four gate crossing arms will span over all lanes of traffic to prevent vehicles from sneaking around the gates when the arms are lowered and not waiting for a train to pass before entering the crossing.*



*The all familiar “crossbuck” will be a staple at all our street level crossings. This universal sign is used the same as a yield sign and motorists must yield at the grade crossing if a train is approaching.*



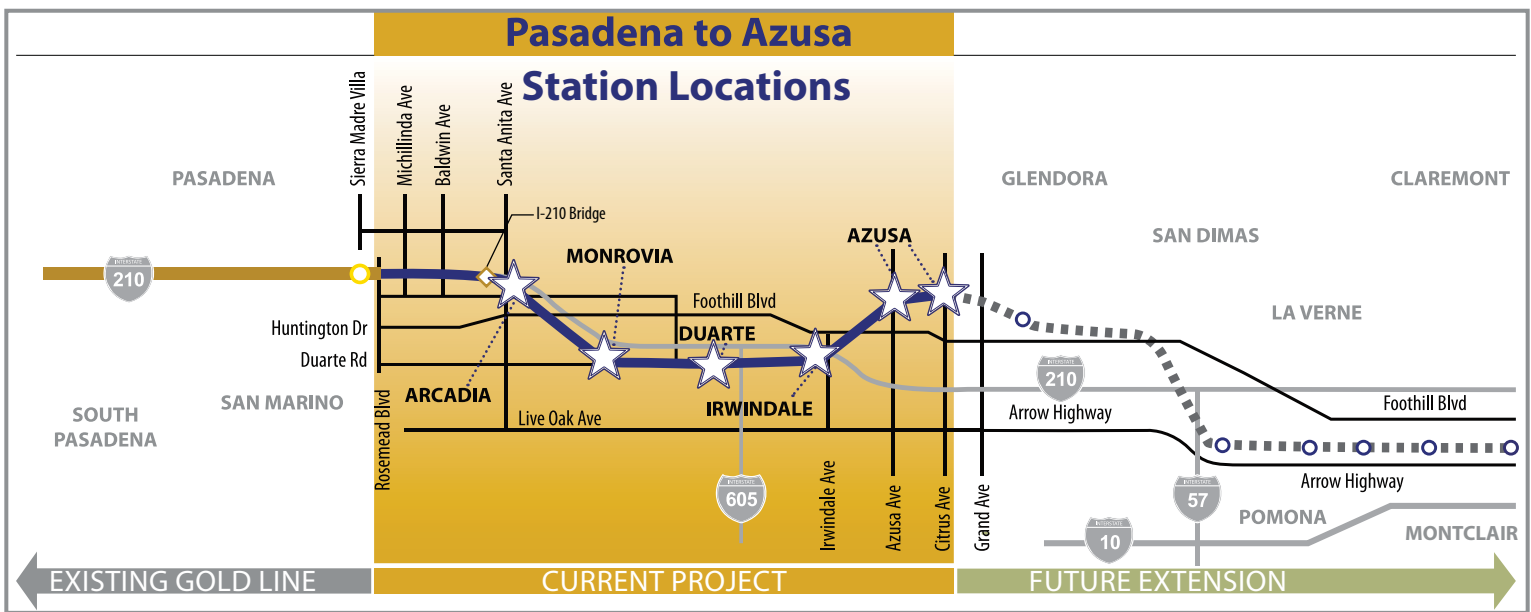
*Pedestrian gate arms are lowered simultaneously with the quadrant gate arms along the street when a train is approaching. This combination of arms will stop all traffic from crossing the tracks including pedestrians and cyclists.*

*Check out the [Designing Safe Grade Crossings](http://www.foothillgoldline.org/news/videos) video on [www.foothillgoldline.org/news/videos](http://www.foothillgoldline.org/news/videos)*

Six new light rail stations are under construction along the Foothill Gold Line from Pasadena to Azusa. Each will have parking, and all will be turned over to Metro in September 2015 for testing and pre-revenue service. Metro will determine when the line (and stations) opens for passenger service. Here are the locations of the future stations in the five cities from west to east:

## Six Stations in Five Cities

- [Arcadia Station](#) is located northwest of the First Avenue and Santa Clara Street intersection.
- [Monrovia Station](#) is located just west of Myrtle Avenue and north of Duarte Road.
- [Duarte/City of Hope Station](#) is located on Duarte Road, west of Highland Avenue just north of the City of Hope campus.
- [Irwindale Station](#) is located just east of the Irwindale Avenue I-210 Freeway overpass.
- [Azusa Downtown Station](#) is located on the east side of Azusa Avenue, north of Foothill Boulevard and across from Target and the historic Santa Fe Train Depot.
- [APU/Citrus College Station](#) is located north of Foothill Boulevard and west of Citrus Avenue, northwest of Citrus College.



## Parking at Each Gold Line Station

Each of the six future Gold Line stations will have parking. Being constructed by a separate contractor, work is on schedule to have the parking completed by mid-2015. Here, you see construction progress at the Arcadia 300-car parking structure which began in late-2013. It is located on Santa Clara St, between Santa Anita Ave and First Ave, directly west of the station and the city's future Transit Plaza.



## Stay Informed

Here are some easy ways for you to stay informed about construction and the project:

- Visit [www.foothillgoldline.org](http://www.foothillgoldline.org) and register to receive construction alerts and project updates to your email
- Text GOLDLINENEWS to 888777 to receive notifications to your cell phone
- Call the construction hotline at (626) 324-7098

Go to [www.foothillgoldline.org](http://www.foothillgoldline.org) and sign-up to receive E-News updates and construction alerts.

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