



# METRO GOLD LINE FOOTHILL EXTENSION PASADENA TO AZUSA

**SKANSKA**

## I-210 BRIDGE CONSTRUCTION UPDATE

January 2012

### I-210 GOLD LINE BRIDGE DESIGN FINALIZED



In November, the Construction Authority reached a significant milestone on the I-210 Bridge Project with the approval by oversight agencies of the final design for the landmark bridge dubbed the “Gateway to the San Gabriel Valley.” The above rendering provides a glimpse of what the \$18.6 million bridge will look like when completed in the summer of 2012.

The approval culminates 14 months of intense design efforts led by AECOM, the bridge engineering consultant, to balance the extensive structural requirements mandated by Caltrans and Metro (it needs to stand up to a significant earthquake), the constructability needs of Skanska (the prime contractor building the bridge), and implementation of the attractive and symbolic features envisioned by the public artist who conceived the design. More on the bridge design and the key players can be found on page 2 of this newsletter.

Meanwhile, construction of the bridge is on schedule and is progressing well. With the completion of the bridge deep foundations in early October, installation of the bridge abutments (the ends of the bridge) and the main bridge columns is underway. The picture on the right shows the initial column installed in the freeway median in early December. The abutments and bridge columns will be completed in late January, setting the stage for construction of the bridge superstructure.

During the coming months, Skanska crews will install the temporary support structure called falsework over the eastbound lanes of the I-210 Freeway. For safety purposes during falsework installation, multiple partial and full closures of the eastbound lanes of the I-210 Freeway will be required. Be sure to register with the Construction Authority at [www.foothillextension.org](http://www.foothillextension.org) to receive updates and on-going advisories on these closures.



#### I-210 BRIDGE FAST FACTS

Length	Width	Height	Clearance	Concrete	Steel
Bridge will span 584 feet from end to end	115 feet between centerlines of the 2 signature support columns	Rail Vehicle wheels will be 33 feet above the freeway surface	Bottom of Bridge will be 19 ½ feet above freeway surface	About 640 full concrete truck loads will be used	About 1,000 tons will be used to reinforce the bridge



## I-210 BRIDGE DESIGN FAST FACTS

### Basket Shape

Inspired by the basket making traditions of the Tongva Tribe, Native American peoples indigenous to the San Gabriel Valley

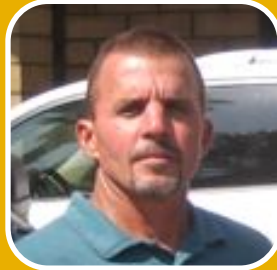
### Landscaping

The center median and shoulder will include a variety of native plants that, once established, require only rain water

### Lighting

Aesthetic lighting will be installed so that the bridge design may be appreciated at night as well as by day

## I-210 BRIDGE WORKER SPOTLIGHT



It takes an experienced professional to manage the work of numerous contractors and their many crews on a construction site like the I-210 Gold Line Bridge project. This is especially true, considering the environment of this particular site - being built along (and above) a busy freeway, underneath high voltage power lines, within a very confined workspace, and requiring frequent night work. Just look at the below picture of a recent concrete pour and you will see what we mean. For this job, Skanska brought on their veteran Superintendent Jeff Jonker, and he has been doing a tremendous job.

A 35-year veteran of the construction industry, with the last 25 spent with Skanska, Jeff calls on all of his experience to make the I-210 Bridge project run smoothly. Jeff is responsible for coordinating and managing all construction crews and equipment on the job site. He considers his role akin to that of a football team quarterback, directing the rest of the team to where they need to be at each stage of construction.

Each day for Jeff begins by meeting with the project engineers and construction foremen to plan the day's activities. According to Jeff, planning is the key to success on any construction project. The engineers rely on Jeff to identify how to safely accomplish the day's tasks. On the project site, Jeff huddles with the team (many have worked together often) to discuss the planned activities, delegate various tasks, and most importantly to discuss matters of safety. As the work goes on, Jeff is never far from the construction activity. A "hands-on" Superintendent, Jeff was last seen by this author strapping on a harness and climbing into a reinforcing steel cage to investigate the progress of a concrete pour.

Jeff is a native Californian and is an avid Chicago Bears fan, which may explain his use of a football analogy to describe his role on the project. Before the I-210 Bridge project, Jeff's biggest project was rebuilding the I-5/I-14 Interchange following the 1994 Northridge Earthquake.



## THE I-210 BRIDGE DESIGN TEAM



With the I-210 Bridge final design now approved, two key members of the design team, Andrew Leicester (far left) and Patrick (Pat) Nicholson (upper-right), can finally take a back-seat, as they watch construction crews implement their design.

Andrew, the project's Design Concept Advisor, is the public artist who was selected following an international search. He conceived the bridge design concept and has worked with the design-build team to ensure his concept is more than a vision. Very aware of the constraints placed on the design by government requirements, budget and matters of constructability, Andrew has been pleasantly surprised at how the bridge design process has actually allowed the design to improve. In his words, "the more time you spend with it, the more you can improve it." According to Andrew, this project is a great example of the benefit of bringing the artist on at the beginning of the process, and he hopes that the I-210 Bridge design starts a paradigm shift for bridge building in California. Originally from England, Andrew made his way to America largely due to his interest in the California art style. He now calls the Midwest home.

Pat is AECOM's Project Design Manager. It is his responsibility to ensure that the bridge design meets the structural and maintenance requirements of the project stakeholders (the Construction Authority, Metro, and Caltrans), and to ensure that Andrew's original concept is implemented as much as possible. A tough job, when you take into consideration the additional design challenges of the bridge's location - over an active freeway and an earthquake fault.

To meet this challenge, Pat began the design efforts as usual, engineering the bridge structure first. He then integrated Andrew's design elements over that structure. To make sure his designers and Andrew were on the same page, Pat recruited Rivka Night (sitting next to Pat in above picture), an AECOM architect, to act as the liaison. This process worked well, and although a few of the design elements needed to be augmented, the end result is a beautiful design that works for all project stakeholders (not to mention Pat and Andrew, who are both proud of the final design and look forward to seeing it completed).

Meanwhile, because construction of the bridge continues, Andrew and Pat - like the rest of us - have to wait a few months for the unveiling of the completed bridge. They won't be going away though. During the next several months of construction, they will both monitor the work to make sure the final product meets their expectations and specifications.

Andrew's other works include the Zanja Madre in the courtyard at the 801 Tower in downtown Los Angeles (see [www.andrewleicester.com](http://www.andrewleicester.com)). Pat's engineering/design highlights include the Metro Gold Line Eastside Extension, which features the popular Mariachi Plaza station.

# I-210 BRIDGE PROJECT SCHEDULE



## I-210 BRIDGE CONSTRUCTION ACTIVITIES

### OCTOBER 2011



Crews finished construction of the I-210 Bridge's three deep foundations in early October (see arrows above), followed by disassembly and removal from the center median of the two large cranes used to build the deep foundations. Work was then started on the foundations for the two bridge abutments, which are the ingress/egress points of the bridge on either side of the freeway. The abutment locations are denoted by the stars in the above picture.

### NOVEMBER 2011



Construction of the bridge abutments continued through November, including completion of the western abutment foundations. To make additional room for the I-210 Bridge's eastern abutment, crews needed to relocate the project time-lapse video camera. The new camera perspective is visible in the above picture, taken at noon on November 30, 2011, about 9 hours before hurricane force winds began to wreak havoc across the San Gabriel Valley.

### DECEMBER 2011



While work on the bridge abutments continued to progress, crews began forming the structures for the bridge columns. To do this, a special mold - called a "form" - was designed and built that could wrap around the reinforcing steel cages that were in place above the deep foundations. Each column requires about 10 truckloads of concrete to be poured into the "form" and allowed to start curing before being removed and moved to another column location. During December, two of the three column structures were completed.

### FEBRUARY - MARCH 2012



In February 2012, crews will begin erecting the temporary support structure (known as falsework) over the eastbound lanes of the I-210 Freeway. The falsework will be used to support the bridge during construction until the bridge structure is strong enough to support itself. The above graphic shows a representation of what the falsework will look like once in place. It will take approximately two months to install the falsework, at which point construction of the bridge's superstructure will commence. During the falsework installation, as many as 20 late-night full eastbound lane closures will be needed. Some of these will occur over consecutive nights, and all will generally occur from Midnight to 5 AM.

# STAY CONNECTED

Want to keep up with the latest construction activity? Be sure to sign up to receive bi-weekly e-mail updates and construction alert texts. Register at the Construction Authority's website: [www.foothillextension.org](http://www.foothillextension.org)

## BATTEN DOWN THE HATCHES

On the night of Wednesday, November 30, 2011, the Metro Gold Line Foothill Corridor was hit by what long-time residents are calling the fiercest wind storm in memory. Comparable to a sustained Category 1 hurricane, the winds uprooted trees, damaged power lines, and left thousands without power for several days.

Although the severity of the winds were unprecedented, the I-210 Bridge contractor, Skanska, was aware of the high wind forecast and took several precautions on the project site to ensure the safety of its workers, project site neighbors and commuters of the I-210 Freeway. The "battening down" activities included installation of additional bracing to the large forms in place to construct the abutment walls and the placement of concrete blocks, weighing 4-5 tons, atop construction material located in the freeway median.

When the winds finally waned, the only damage sustained at the project site was to the fabric soundwall, which was quickly repaired and the I-210 Bridge construction work continued without delay.

## I-210 BRIDGE DETOUR MAP

During periods of full closure of all eastbound lanes of the I-210 Freeway, traffic will be detoured off the I-210 at Baldwin Avenue and routed along Foothill Blvd to Santa Anita, as shown in the below map. Full closures will begin no earlier than Midnight and will end by 5:00 a.m.



# 24-Hour Toll-Free Project

Hotline: 855-446-1160

**METRO GOLD LINE** METRO GOLD LINE FOOTHILL EXTENSION PASADENA TO AZUSA

**I-210 BRIDGE** **SKANSKA**

**BI-WEEKLY CONSTRUCTION NOTICE**

**DECEMBER 11 - 24, 2011**

**WHAT:** Construction activity on the center median of the eastbound I-210 Freeway may require partial eastbound lane closures.

**WHEN:** Occasional lane closures of up to three eastbound lanes will take place during this period. Closures will start no earlier than 10 p.m. and end by 1 p.m. the following day. One full closure of all eastbound lanes is anticipated for this bi-weekly period.

**WHERE:** Eastbound lanes of the I-210 Freeway, between Rosemead Blvd. and Santa Anita Ave.

**WHAT TO EXPECT:** During the next two weeks, crews will continue constructing the walls for the two bridge abutments, and forming the structure of the three main columns.

**Note:** The signature basket shape of the columns will be installed at a later date.

A full closure of all eastbound lanes will be needed to transport the column "form" from the center median to the southern shoulder.

Construction schedules are subject to change for various reasons including but not limited to weather conditions and unforeseen delays. Please note that other construction projects are also affecting the Arcadia stretch of the I-210 Freeway. To learn more about upcoming ramp and lane closures from these projects, be sure to visit the websites listed below.

**24-Hour Toll-Free Project Hotline: 855-446-1160**

**For I-210 Bridge Information:**

- [www.foothillextension.org](http://www.foothillextension.org)
- [www.gds11.com](http://www.gds11.com)
- <http://www.dot.ca.gov/dsd07/>
- <http://caltransinfo.blogspot.com/>

**Questions? Comments? Call...**

**For I-210 Bridge Construction Info:**  
 Joe Hernandez, Community Liaison  
 Skanska USA Civil  
 (626) 593-4040  
[johernandez@skanska.com](mailto:johernandez@skanska.com)

**For Foothill Extension Project Info:**  
 Sylvia Beltran, Community Outreach Coordinator  
 Construction Authority  
 (626) 305-7012  
[sbeltran@foothillextension.org](mailto:sbeltran@foothillextension.org)

**Questions? Comments? Call...**

**For I-210 Bridge Construction Info:**

Joe Hernandez  
Community Liaison  
Skanska USA Civil  
(626) 593-4040  
[johernandez@skanska.com](mailto:johernandez@skanska.com)

**For Foothill Extension Project Info:**

Sylvia Beltran  
Community Outreach Coordinator  
Construction Authority  
(626) 305-7012  
[sbeltran@foothillextension.org](mailto:sbeltran@foothillextension.org)

Stay Connected... Visit the  
Construction Authority's website:  
[www.foothillextension.org](http://www.foothillextension.org)  
& sign up for construction  
notices or other updates.

204 N. 1st Street  
Arcadia, CA 91006

