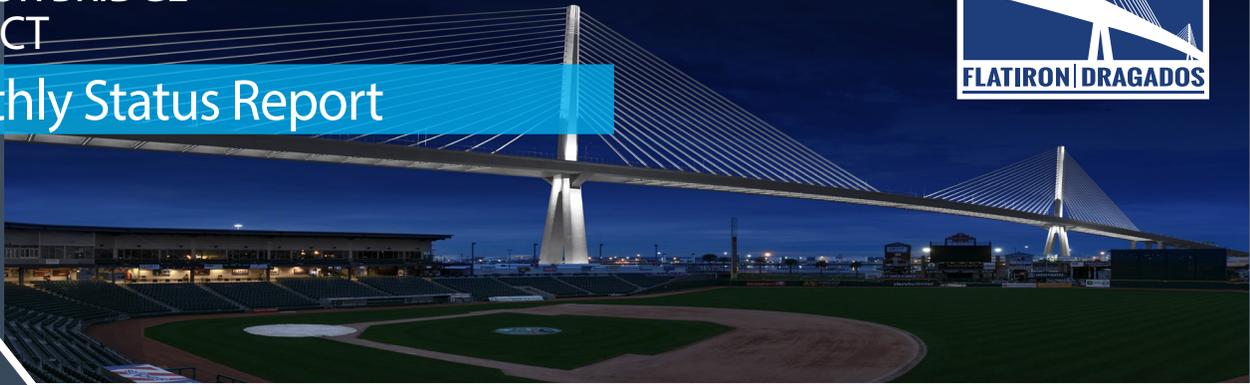




Monthly Status Report



Toll Free: 1.877.227.4144 • Public Information: publicinformation@harborbridgeproject.com

April 2021

South Approach – Falsework Segment Erection

With any large construction project, there are many stages where a structure is unable to support itself. Falsework erection is an ancient construction method where a temporary framework is used in building bridge structures to support heavy loads and hold items in place until the section becomes self-supporting. Alongside the Launching Gantry Crane (LGC), falsework built with steel scaffolding is used to erect twelve spans on the south approach (SA). Nine of the SA falsework spans were completed last year to make up the first nine spans or north and southbound main lanes. Erection is underway for the three remaining falsework spans with scaffold tower heights at their physical limits and more than doubling at up to 77 feet versus the original nine spans in the 35 feet tall range. Complex engineering, geometry, survey assessment, and geotechnical monitoring are essential for falsework spans to align precisely with LGC erected spans.

Ground preparation involving excavation, laying geogrid to reinforce the subbase, and adding cement-treated base to create a slab is critical to enhancing stability before building the scaffold towers. Special attention is paid to settlement caused by compressed earth as falsework is loaded with concrete segments weighing up to 110 tons each. It is not uncommon for the ground to actually seep out from the sides of the falsework foundation, which is particularly compounded with heavy Spring rains. Constant ground shifting forces crews to work quickly to complete the post-tensioning process to prevent misalignment on a span weighing up to 2,200 tons before it is self-sustained without the platform. Survey crews are involved every step of the way and multiple times daily to monitor ground surface leveling, the falsework layout, check deck heights at specific points, and compare actual elevations to predetermined elevations as calculated in the falsework schematics. Fortunately, procedures recommended by specialized falsework engineers are in place to modify falsework heights to compensate for geotechnical movement and geometrical alterations needed to merge new ramp spans with previously LGC erected main lane spans. Hydraulic steel jacks are strategically placed on top of the falsework towers and incrementally adjusted with five to ten iterations at a time to lift span segments as needed to horizontally merge new ramp spans with previously erected LGC main lane spans. The LGC is easier to work with because it can hang an entire span and manipulate the whole span to meet final calculations. However, falsework erection with crawler cranes and man-lifts allows for the precision necessary to combine ramp lanes and main lanes.

Crew of the Quarter – Q1 2021

Congratulations to this outstanding Roadworks/Structures crew for exceeding an ambitious production goal in the first quarter of 2021. Under the leadership of Luis Espino (Superintendent), Wayne German, (General Superintendent), Sergio Sandoval (Foreman), and Sully Jawandor (Field Engineer), the magnificent team worked extended hours to catapult the new interchange construction progress, with no recordable safety incidents!



HARBOR BRIDGE
Corpus Christi, Texas



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Calendar Events:

May 18:
Project Management
Institute Presentation

May 25:
Corpus Christi City Council
Presentation