PROJECT CASE STUDY / MUNICIPAL · ARCHITECTURAL FABRICATION

Borden Road Bridge Improvement

San Marcos, California · City of San Marcos

Prime Contractor: Flatiron West, Inc.



Borden Road Bridge — framed mesh-infill panels along the outboard barrier and a curved baluster rail on the roadway side, both following the bridge's radius.

OWNER
City of San Marcos

PRIME CONTRACTOR
Flatiron West, Inc.

IN-LINE ROLE
Custom handrail & metal fabrication

SUBCONTRACT
3130-12-106, effective July 2012

OWNER CONTRACT
No. 88165, May 2012

DELIVERY
Municipal public works · IUOE Local 12

THE PROJECT

The City of San Marcos rebuilt the Borden Road bridge as a public improvement — wider, safer, and with a separated walkway alongside the roadway. It is a piece of civic infrastructure in the middle of a residential neighbourhood, which means people look at it every day.

Flatiron West held the prime contract. The architectural metalwork went to In-Line's custom fabrication arm.

WHY IT WAS HARD

Two railing systems, one curve

The bridge carries a curved alignment, and the metalwork has to hold it. On the outboard side, framed panels with mesh infill sit on top of the barrier wall. On the roadway side, a baluster rail runs the length of the walkway. Both follow the same radius, and both have to look like they were always going to meet where they meet.

A finish that has to age well in public

This is a neighbourhood bridge, not a highway structure. The metalwork was specified with an architectural finish that reads as warm rather than industrial, and it sits at eye level for everyone who walks across. There is nowhere to hide a bad weld, a misaligned panel or a joint that does not line through.

Fabricated to a bridge, not to a catalogue

Panel widths, post spacing and rail radii were set by the structure. In-Line drew it, built it and finished it in the shop, then delivered to a bridge deck being built to that same geometry — with no tolerance to absorb a discrepancy in the field.

WHAT IN-LINE DELIVERED

- **Framed mesh-infill barrier panels** along the outboard edge, set on the bridge barrier wall and following the structure's curve.
- **Curved baluster railing** separating the walkway from the roadway for the length of the bridge and its approaches.
- **Custom fabrication throughout** — shop drawings, fabrication and architectural finish coordinated in house.

- **Delivery to a municipal public works schedule** under a city business licence, IUOE Local 12 agreement and the City's standard specifications.

SCOPE AT A GLANCE

Architectural bridge railing | Mesh-infill panels | Curved baluster rail | Custom fabrication | Shop drawings | Architectural finish

THE RESULT

The bridge carries Borden Road and the people walking beside it. The railing has been in service for over a decade, in a residential neighbourhood, at eye level, every day.

A highway rail is judged by a crash test. A neighbourhood bridge rail is judged by everyone who walks past it, for thirty years. Those are different problems, and they need a fabricator who knows it.

WHY CITIES AND ARCHITECTS SPECIFY IN-LINE

In-Line runs its own fabrication shop. Curved rail, mesh infill, architectural finishes, bridge geometry — drawn, built and finished under one roof and one accountability.

- **We build to the drawing, including the curve.** Variable radius, matched panel modules, joints that line through — Borden Road in San Marcos, the Mesa Housing bridge at UC San Diego.
- **We resolve it in the shop.** Shop drawings and connection details worked out before delivery, because a bridge deck will not move to suit a railing.
- **We control the finish.** Architectural coatings, galvanizing, powder coat — specified and applied as part of fabrication.
- **We are certified, bonded, signatory, and safe.** DBE · SBE · SLBE · SB · HUBZone · SBA 8(a). Union affiliated, Local 89 & Local 12. CSLB C-13, C-51, C-32. Bonded through Old Republic Surety, rated A+ XV. **EMR 0.68.**

Thirty-five years. Municipal, federal, transit, utility, school district and university work across Southern California. One standard.

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