



# I-10 Widening Project Case Study

Representing Quality and Efficiency

## AT A GLANCE

I-10 runs through a bustling part of Southern California, and Caltrans needed to widen the interstate to add High Occupancy Vehicle (HOV) lanes.

## CHALLENGE

The Interstate 10 widening project caused a significant change to the routing that provided backhaul and power to two DAS nodes. The relocation of the nodes needed to be completed in a way that minimized downtime. The overall project had three distinct locations and was broken into three phases: Via Verde Street, The Barn, and The Windmill. Each area had its own set of unique challenges. The entire project needed to be precisely coordinated and managed with all of the other providers, including Southern CA Edison, Caltrans, the City of Covina, the City of West Covina, and a tier-1 wireless infrastructure company, in order to meet their deadlines and to stay ahead of the crews widening the highway.

### KEY METRICS

- Relocate Aerial Fiber Optic Cables
- Trench, bore, and place new underground conduit
- Relocate existing underground cables
- Transfer DAS node equipment to new poles



**3000'**  
Underground and Aerial Fiber Cable



**2**  
DAS Nodes



**Detailed Planning**



**Precise Coordination**



**Minimize Downtime**

## SOLUTION

As part of the initial project review, Ridge engineers walked, fielded, and surveyed the existing facilities at each of the three project locations. They then gathered records from Southern CA Edison, the Cities of Covina, West Covina and the wireless infrastructure company to produce the construction plans for the aerial and underground relocations. Once the construction plans were completed, the next step was for Ridge to create the traffic control plans required by the jurisdictions and detailed Methods of Procedure (MOP) for the wireless infrastructure company. The MOP for each phase detailed how the relocations would be done and how the existing live service would be taken down and restored as the relocation was completed. Finally, Ridge developed plans for removing and disposing of abandoned poles, conduits, vaults, and other equipment.

During the planning and throughout the project, Ridge attended project meetings with the agencies, utilities, communications providers, and jurisdictions involved and provided status updates to the Site Modifications Team.

## PHASES



1

### Via Verde Street

The Via Verde Street project consisted of relocating underground fiber optic cable and power lines that provided backhaul and power service to the DAS node SD14m2. [Read More](#)



2

### The Barn

The Barn phase of the project consisted of relocating aerial and underground fiber optic cable and power lines that provided backhaul and power service to the DAS node COV-08. Like Phase One, this also had to be completed, minimizing downtime for the node. [Read More](#)

3

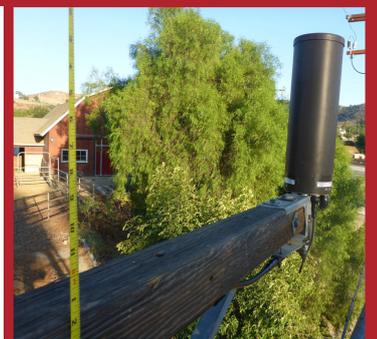
### The Windmill

The Windmill phase (named after the actual windmill located on the project) presented some unique challenges in the relocation of the fiber and power because both the existing and new poles were off-road on a hill above the existing road grade where the sound wall was being installed. This required Ridge to utilize an aerial lift capable of reaching over 65 feet straight up. [Read More](#)

## RESULTS



Once planning for each phase was completed, permits were pulled and approved, and three distinct phase project schedules were agreed on. Because of the detailed planning and close coordination with the other providers, each phase of this project, Via Verde Street, The Barn, and The Windmill, was successfully completed within the timeline set forth by Caltrans and the tier-1 wireless infrastructure company with minimal downtime.





1

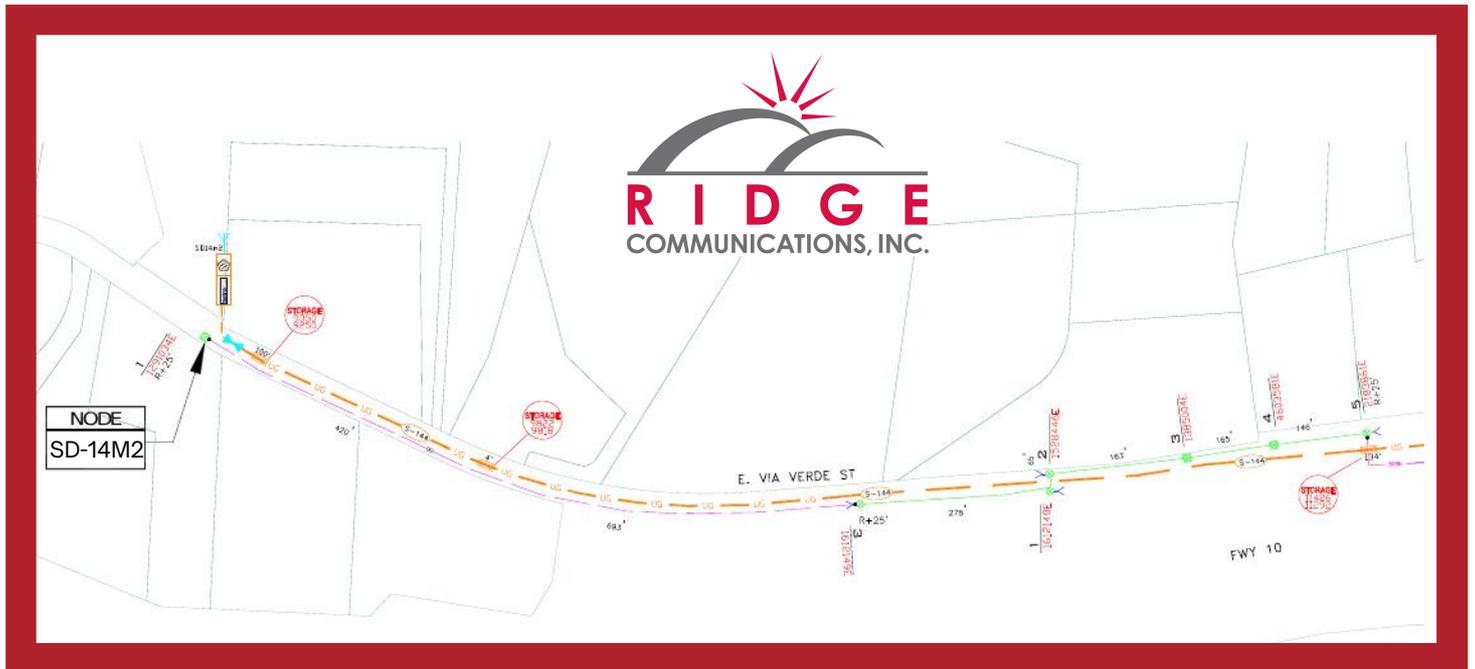
Via Verde Street

The Via Verde Street project consisted of relocating underground fiber optic cable and power lines that provided backhaul and power service to the DAS node SD14m2.

Once the plans were submitted, and permits were approved, the project had to be coordinated with Southern CA Edison to ensure the power service would be provided to the new pole where the DAS node was to be relocated. The relocation started once everything was planned and coordinated with Southern CA Edison. Most of the work was done during overnight shifts minimizing downtime and disruption to service.

Work started by placing the new aerial and underground infrastructure on the north side of Via Verde Street, allowing tie into a new riser pole where the aerial fiber would then transition to underground fiber. Next, the live fiber was pulled back from the node and rerouted to the new underground conduits, splicing the fiber at both ends. Ridge then placed the new strand and hardware on the new poles on the north side of Via Verde Street. Once that was complete, the next step was to de-lash 951 feet of existing aerial fiber and lash it to the new strand and hardware on the new poles splicing the fiber at both ends.

At each step in the process, there was confirmation that the node was returned to service. To wrap up this phase, Ridge removed the abandoned poles, conduits, risers, vaults, and miscellaneous equipment to dispose of them.



## 2

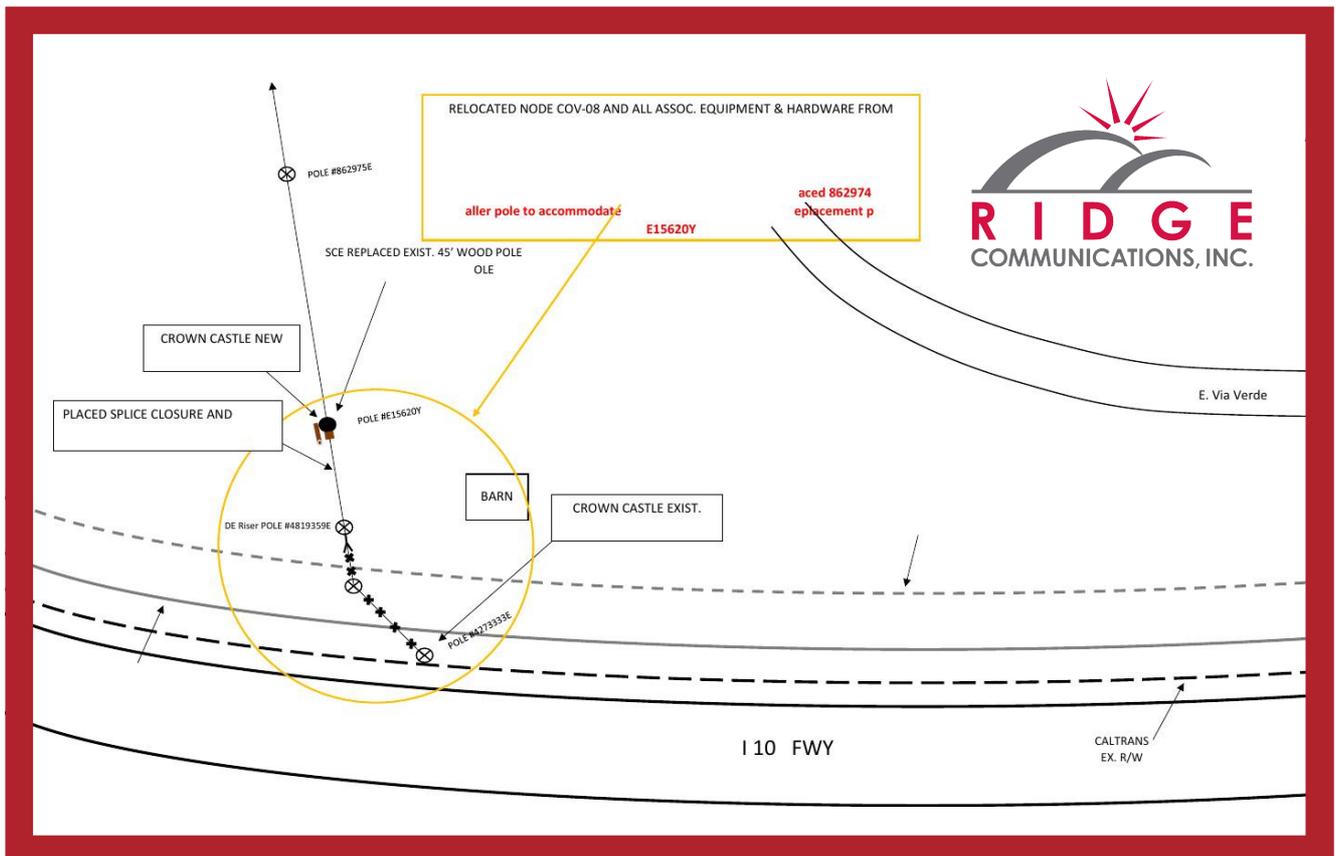
### The Barn

The Barn phase of the project consisted of relocating aerial and underground fiber optic cable and power lines that provided backhaul and power service to the DAS node COV-08. Like Phase One, this also had to be completed, minimizing downtime for the node.

Because this phase required the relocation to be to a rear easement that was off-road, the first step was to relocate the aerial fiber from a series of poles that ran alongside the I-10 eastbound and the Holt Ave exit ramp. The fiber was pulled down and rerouted through the new underground conduits that were placed by Southern CA Edison as part of the joint trench effort where trenches were shared by power and communication providers.

After producing the traffic control plans and obtaining Caltrans approval, a permit was issued, and the relocation work began.

This phase required close coordination with the city of Covina, Southern CA Edison, and Ridge. Permits and the schedule for work and rerouting the power were all planned and managed closely. Because the new node pole that was being put up was in a rural area across a field, a four-wheel drive aerial lift was required to be brought in. Work was completed overnight.



# 3

## The Windmill

The Windmill phase (named after the actual windmill located on the project) presented some unique challenges when relocating the fiber and power. Both the existing and new poles were off-road on a hill above the existing road grade where the sound wall was being installed. This required Ridge to utilize an aerial lift capable of reaching over 65 feet straight up.

As with the other phases in this project, the coordination with Southern CA Edison, Caltrans, and the Caltrans contractors building the sound wall needed to be exact. There was a tight window of time to get the fiber and node relocated, so the freeway widening project was not delayed.

Once plans and drawings were approved, Ridge worked to quickly relocate the existing aerial fiber along Covina Hills Road to the new poles placed by Southern CA Edison. Once the fiber was laid, the DAS Node SD-22 was ready to be relocated. Like the two other phases of this project, the work needed to be done overnight during the carriers' maintenance windows, minimizing the impact of having a node out of service.

As soon as the relocation was complete, Southern CA Edison arrived to provide service to the new node location. Once the power was up, Node SD-22 was returned to service, and the final phase was successfully completed.

