

DEWALT JOBSITE WiFi SYSTEM & MARTIN BROS. CONSTRUCTION INC.



28
ACCESS
POINTS
USED



Photography provided by Visualhouse

2M
SQUARE FEET

\$1B
PROJECT

“What excites us most about DEWALT’s WiFi system is the possibilities it creates for the future. As we continue to strategically combine augmented reality and 3D modeling, the mesh network will help accelerate the research and development stage. With another valuable tool at our disposal, it is only a matter of time before we implement some application of augmented reality on all of our projects.”

— Martin Bros. company newsletter

PROJECT IMPACT



UNDER 4 MINUTES SPENT
TRANSFERRING 1GB OF BIM DATA



2 HOLOLENS™ USED ON SITE
AT THE SAME TIME



29.6GB DOWNLOADED
IN ONE WEEK

“At Martin Bros. we see augmented reality changing the entire framework of the construction industry. Having [the DEWALT WiFi system] on the jobsite allows us to expand and further develop our use of AR and the Microsoft HoloLens.”

— Robert Klugh, President

*Based on actual case study findings

Martin Bros. was given free product to participate in this study.

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THE CHALLENGE

Plans on paper are outdated. Before digital solutions, foremen walked the jobsite with paper blueprints and took photos to verify project status and quality. Then, the foremen walked back to the office, loaded the photos to a computer, highlighted the changes, updated plans, and distributed feedback to the team.

Contractors want to start leveraging revolutionary tools like Microsoft HoloLens™ - an augmented reality platform - and Procore® - a construction management and documentation tool to increase efficiency and tracking of their projects. With limited jobsite connectivity, the Martin Bros. team was unable to test projects in the field and was losing time with trips to the office to upload content. To enable these tools, some foremen carry cellular hotspots; however the service is often unreliable, costly, and not easily shared between multiple devices.

THE SOLUTION

To overcome these challenges, the Martin Bros. leadership team set a stretch goal to become a paperless construction company. They understood that digitizing the jobsite would allow them to move closer to achieving this goal, but needed to solve their internet connectivity challenges. Martin Bros. worked with DEWALT to implement a Jobsite WiFi system that brought internet access to their phase of the \$1B Oceanwide Plaza site in downtown Los Angeles.

The DEWALT Jobsite WiFi system used wireless-mesh technology to expand WiFi access from the trailer to their entire jobsite. This

allowed foremen to connect to the internet on-site and reduced walks back to the trailer for Procore® uploads. It also gave the team a chance to test and deploy new technologies, like augmented reality (AR) - head-mounted displays that show framing diagrams in place. For Martin Bros., this required the ability to stream data from 3GB BIM files in real time, which is very difficult with today's cellular technology and data costs.

THE RESULTS

With the addition of the DEWALT Jobsite WiFi system at the Oceanwide Plaza site, Martin Bros. saw an increase in connectivity, bandwidth, time savings, and their bottom line. They were able to take their goal of being a truly paperless construction company to the next level, and the team achieved a greater level of digital collaboration with over 1GB of BIM data transferred in under four minutes. Tasks that previously required a walk back to the job office could be done on the spot. Reliable connectivity improved and foremen received Procore® updates and assignments immediately, giving them real-time and actionable insights that created a reduced risk of rework.

Furthermore, with the DEWALT Jobsite WiFi system, Martin Bros. began field testing new cutting-edge technologies like Augmented Reality Framing on the Microsoft HoloLens™ and the RemoteAR® app. These technological advances are just the beginning for Martin Bros. as they embrace the digital construction solutions of the future with the goal of becoming completely paperless.

Based on actual case study findings

“On-site WiFi has made it possible to utilize the RemoteAR® app, which offers a live video connection with 3D annotations between the HoloLens™ and a remote user. It is very exciting to see DEWALT’s WiFi system open the door for many technological innovations we plan on cultivating in the near future.”

— Robert Klugh, President