EASY-TO-IMPLEMENT SOFTWARE SOLUTIONS IN THE BUILT WORLD:

How MasTec Is Pushing Power Projects to Permit up to 50% Faster with AirWorks

POWER INFRASTRUCTURE IS A HOT ISSUE:

Recent winter storms, heat waves, and hurricanes are driving efforts to **bolster grid resiliency.**

The push for electric vehicles has created the need for a new **nationwide network of charging stations.**

A global shift towards sustainability means existing **power infrastructure needs to be upgraded and expanded** to accommodate more renewable energy.

With so many challenges on the horizon, the existing workforce likely won't be able to keep up with these rapid changes and pressing timelines. Targeted applications of AI and technology will play critical roles in how teams tackle the transformation of power infrastructure.

Just ask MasTec.

BACKGROUND

With over 90 years of experience in critical infrastructure development, MasTec delivers quality turnkey solutions for complex projects in communications, energy, water and sewer, power distribution, and more. Whether handling new buildouts or existing upgrades, their teams have the expertise and depth to take on the most ambitious infrastructure challenges across North America, from initial planning and permitting to final construction. With a culture centered around innovation and efficiency, MasTec has positioned itself at the forefront of the rapidly evolving landscape of infrastructure design and construction.

MasTec
Infrastructure that Delivers

Over the next 10-15 years, MasTec is working with their clients to convert their entire lateral overhead network to underground delivery. In the program's first official year, MasTec is set to remove 200 miles of urban overhead power, which translates to roughly double the mileage of underground installation. This is a 40% increase over the program's pilot in 2022, with an expected significant increase in workload year over year to mete the program's timeline.

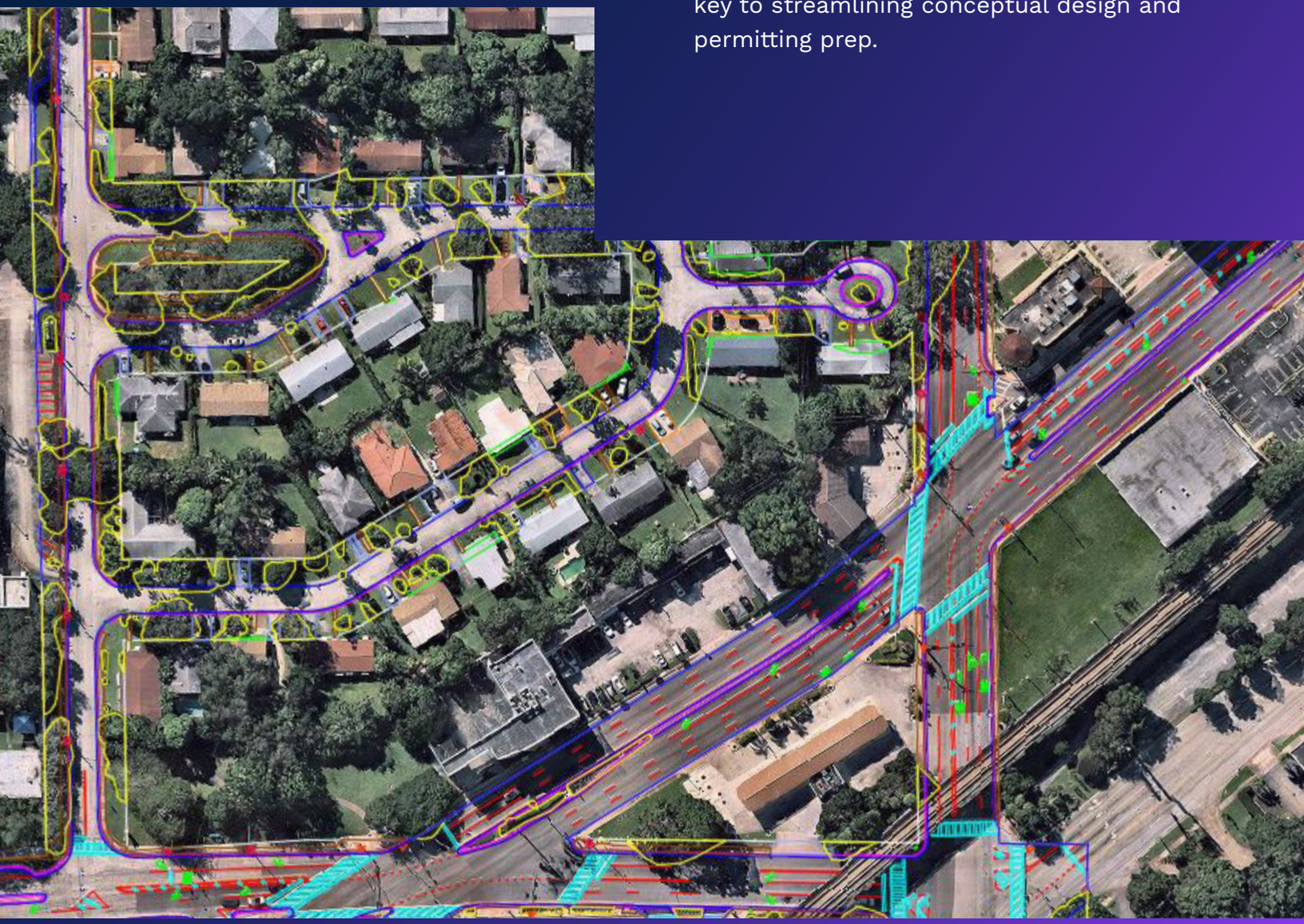
MasTec Energy Solutions Director of Professional Services Kevin Hotchkiss is up for the challenge. As leader of five project managers, seventeen engineering managers, seventy engineers, and fifteen drafters for three regional zones, Hotchkiss is always on the lookout for ways to streamline his teams' workflows through smart automation of tedious tasks.

CHALLENGE

As Hotchkiss and his team dug into planning and permitting, their initial, labor-intensive process went something like this: designers created conceptual plans based on open GIS sources with minimal features. Then, drafters were faced with manually extracting the remaining dense urban site features from satellite imagery to meet right-of-way (ROW) permit requirements.

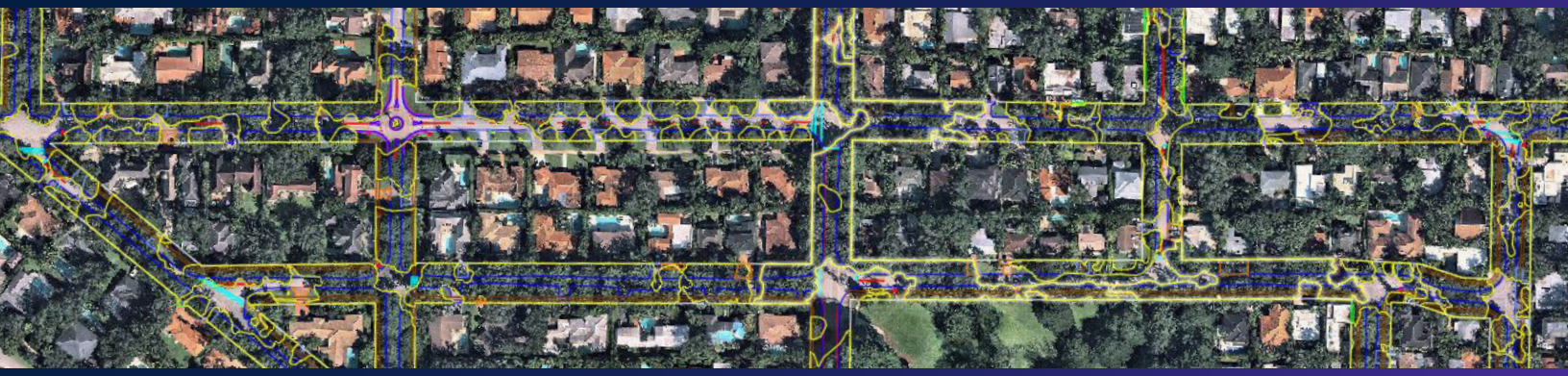
The result? A time-consuming design and permit prep process.

With payments hinging on permit approval and the possibility of designs causing setbacks during construction, Hotchkiss knew these early-stage delays could be costly. Addressing these issues would be crucial in handling the high project volume and aggressive timelines. When he came across a Facebook ad for AirWorks, he realized AI drafting software might be the key to streamlining conceptual design and permitting prep.



AirWorks has revolutionized MasTec's conceptual design and permitting phases, allowing Hotchkiss's team to turn out more projects faster. Previously, it took 3-5 weeks to turn around an individual permit package. Now, with AirWorks data, the process takes a maximum of 2-2.5 weeks. For Hotchkiss, the benefit is clear:

"From where that team started to where it is now is a **night and day difference**. The amount of work they're able to perform [with AirWorks] is **significantly more than what they were doing** [before]."



BENEFITS

The benefits don't stop at time savings. Starting projects with comprehensive, AI-developed site plans produced with high-quality Nearmap aerial imagery has allowed their power team to do more with less while improving the quality of conceptual designs and increasing confidence in plan accuracy. Additionally, Hotchkiss and AirWorks collaborated on a customized feature that has improved user experience for uploading ROW files for processing.

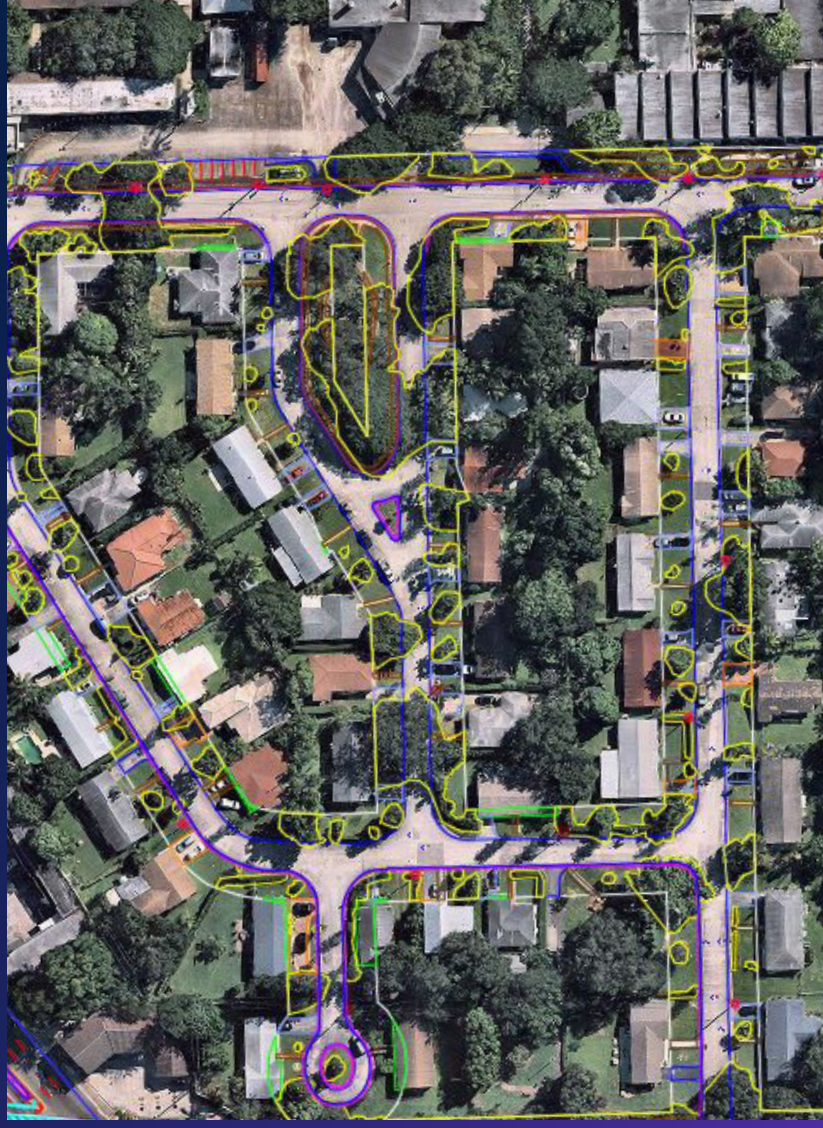
Real Benefits with Collaboration

+ DOING MORE WITH LESS AND SAVING

+ IMPROVED CONCEPTUAL DESIGNS

+ INCREASED PLAN ACCURACY

+ CUSTOMIZED USER EXPERIENCE



Doing More with Less and Saving

Without AirWorks, Hotchkiss would have needed to expand his teams to keep up with project volume. Teaming up with AirWorks is cost-effectively boosting production while reducing the need for recruiting, hiring, and training.

"We're able to do more with a fewer number of designers – it's not only a time savings but an overall cost savings. **What we pay per project is significantly less than the additional manpower that would be needed to handle these ourselves.**"

Improved Conceptual Designs

Developing conceptual designs with a more comprehensive site plan that includes features from AirWorks' 14+ layers means Hotchkiss and his team can identify potential field interferences from the start. A more informed initial design means earlier permit submittals and smoother permitting and construction phases. Fewer changes down the line reduce timelines and allow the team to tackle more projects – ultimately resulting in faster payouts and bigger profits.

Increased Plan Accuracy

Collaborating with technology eliminates the pressure of manually identifying and drafting intricate site features, like manholes, fire hydrants, driveway aprons, and sidewalks, with positional accuracy. With AirWorks' patented AI feature extraction and human-in-the-loop QC, designers can be confident that they are working with deliverables that accurately capture the expected site features. At the same time, drafters can focus their time and energy on other aspects of the permit process and more valuable, thought-driven tasks.

+ Customized User Experience

MasTec’s underground utility projects run along extensive ROW corridors. To create the files for upload, Hotchkiss was spending a significant amount of time creating large polygons encompassing a permit-required buffer around the ROW. He envisioned a way that could make the process easier, and based on AirWorks’ partnership approach and the easy rapport he’d developed with the team, he felt comfortable bringing it up.

Hotchkiss pitched the idea of being able to select a processing area based on a centerline, which would then automatically encompass the buffer on either side. Understanding how this would significantly streamline the preparation of ROW files for processing, AirWorks’ software team got to work and made it happen. Now, MasTec and future utility clients can enjoy an easier, faster, and more credit-friendly process for selecting a ROW based on a centerline with an automatic buffer.

> “The fact that [AirWorks is] open to potential improvements and [has] the team in place to get those done spoke a lot for the company.”

FUTURE

Hotchkiss believes AirWorks will be pivotal in helping his team meet the targeted yearly increases throughout MasTec's massive Florida underground power conversion. Meanwhile, he's also working on spreading the word internally. His cost and time savings numbers and positive experiences have caught the attention of MasTec's fiber division, and AirWorks is on their radar as they gear up for permitting phases on upcoming projects.

Impending urgent changes in power infrastructure can't wait for the workforce to catch up with demand. Leveraging technology in planning and permitting phases can help industry leaders meet tight deadlines and keep up with high project volume. Contact AirWorks today to see how we can help you deliver more power projects faster.