

# Hospital Security System Design In 1 Site Visit

## How Butchko•ESI Used Visual Plan Digital Twins On A Million Ft<sup>2</sup> Campus

By utilizing a MadV360 camera for capture and Visual Plan's SiteView platform to organize, analyze and process 360° photos of the hospital job site, Butchko•ESI was able to expedite the security system's design through streamlined internal planning, reduction in travel requirements and effective communication with internal and external stakeholders.

Both Butchko•ESI and their hospital campus clients realized tangible cost savings as a direct result of incorporating Digital Twins into the security systems design and project management process.

**3-4**  
additional  
site visits  
avoided

reduced  
travel budget  
**by 80%**

**\$25k +**  
**saved**  
in rework costs

### A Single Site Visit Using Digital Twins For Security System Design

Working within the hospital's access restrictions and under COVID travel regulations, Butchko•ESI performed the 360 capture and on-site risk analysis within their limited budget for travel. Using a hardhat mount, the team captured the hospital campus using the MadV 360 camera as they walked through the job site; the panos were processed and aligned using Visual Plan SiteView to create a detailed virtual walk-through of the facility.

By incorporating Visual Plan Digital Twins as part of their assessment process from start to finish, the team reduced what would likely have been 3-5 trips to a job site down to just a single site visit from security system conception to design delivery.



#### 360 CAPTURE SPECS

**camera** Madventure 360

**capture method** HDR tripod inside tanks, walking helmet cam and pole on exteriors

**capture size** ~1 Million sq ft

**capture time** ~20 hours over the course of a single 3-day site visit to simultaneously capture the hospital, identify key assets and perform on-site risk assessment.

- ✓ **TANGIBLE TRAVEL SAVINGS**
- ✓ **IMPROVED CLIENT COMMUNICATION**
- ✓ **STREAMLINED DECISION-MAKING**

"For any risk assessment, we typically incorporate 2 or more team members. This allows us to tag-team the site survey for collecting and capturing the 360 photos. We leveraged Visual Plan as an internal review tool and remotely accessible reference point without needing additional site visits."

- O&G Customer

## KEY PLATFORM FEATURES

- Camera Agnostic Platform
- Video Capture / Multi-shot Capture / Single-shot Capture
- Pano Editing Tools
- 2D CAD/Floor Plan Import
- Automatic & Manual Redaction of Faces through a Blur
- Share/Reporting (Deep links to specific locations / User access controls / HTML Reports)
- Remote Viewing & Access
- Secure Cloud Storage

## Critical Features For Success

Over the life of the project, the captured digital twins were critical for visual comparison, addressing revised customer requests, and designing around existing hospital structure: minimizing rework and expediting decision making entirely remotely.

- Barrier to entry was low with regard to the capital investment
- Easy import, scale and alignment of floor plans to GIS via Import Floor-plan Wizard
- Simple auto and manual orientation of 360 imagery to CAD to enhance understanding
- Intuitive organization of 360 photos across levels, areas and spaces (accelerated via the Visual Plan Capture App)
- AI spatially & accurately aligned the panos automatically with  $\pm 1''$  accuracy.

## Tangible Time Savings: ROI Of Digital Twins For Security System Design

The largest ROI came from realized, tangible time savings as a result of utilizing digital twins for project management: all stakeholders were able to review the photogrammetry to minimize reconfigurations and design change cost overruns. Short term value was seen in rectifying corrections of the provided floor plans, laying a foundation for long term return on investment through an expedited and more accurate design process. Visual Plan's SiteView provided the ability for Butchko•ESI to simulate and verify scenarios of the security system design by having comprehensive, 360 photo documentation information readily accessible. Viewing these visuals in real time with their stakeholders accelerated approvals, client understanding and overall comprehension of the security system design and implementation.

**Butchko•ESI's client changed the scope mid-project to add new areas and remove others from the integrated security system design. With digital twins in hand, they were able to review the photos for reference, without needing to go back on site or having the client take photos for them: 360 photos and dynamic data visualization provided the ability to change scope with minimal effort.**

**“We had a net savings in cost reduction to produce deliverables, correlating to reduced costs for the client as well. Our normal requirements of 3-5 trips to the project site of this complexity were reduced down to 1 trip from conception to delivery. Visualization through photogrammetry became the foundation for our internal planning and communications with the client.”**

*- Benjamin M. Butchko,  
Founder / CEO, Butchko•ESI*