



AVT Drones For Vertical Façade Inspections

Utilize AVT Drones to capture high-resolution façade maps and 3D models





Building Infastructure is Crumbling Nationwide

Facade inspections has become a growing area of concern and costly expense for property management companies, building owners and contractors over the last decade. Until recently dangerous, unconventional scaffolding systems were the only way to physically inspect, identify and document existing conditions for building analysis and remediation. Structures that are five or more stories tall are required to have a licensed architect or engineer regularly inspect their facades for unsafe conditions which meant going back to expensive and hazaderous rope & pulley systems, swing stages and bucket trucks.

With the rapid technology advancement seen in the last 5 years with drone aircraft and specialized task-based software like Drone Deploy, UGCS and Autodesk the facilities management industry is primed to reap the benefits of highly-skilled drone companies reducing the inspection time of vertical structures exponentially. By using drones to collect data, facilities and property management firms can now safely and efficiently analyze and recommend remediation as quickly as within 24 hours of an inspection.

Say bye to dangerous, inefficient inspection methods, the drones have arrived!



Problems We Solve

- Remain compliant with maintenance and inspection ordinances
- Safely identify failing building components and hazardous conditions
- Save money and reduce cost versus hands-on inspections
- Reduce cost and the use of scaffolding and swing-stage time
- Identify remediation work oversight
- Reduce liability by keeping workers and pedestrians safe on the ground from potential falling objects
- Inspection reports are available within hours depending upon project size instead of days or weeks.



Our vertical scanning tools for industrial inspections save time and are more cost effective than traditional survey equipment

Our Façade Applications Services



- Full exterior façade surface scanning with annotated imaging
- Pre/post restoration condition assessment photogrammetric mapping
- 3D Point Cloud/mesh modeling with centimeter accuracy for use in comparing as-build and BIM 360
- Live video streaming and documentation
- Full interior laser scanning
- Interactive web portal for reporting
- Full autonomous or manual flight processing
- Façade scans with geo-tagged imagery

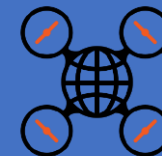
We have the software solutions to manage any project



AIRMAP

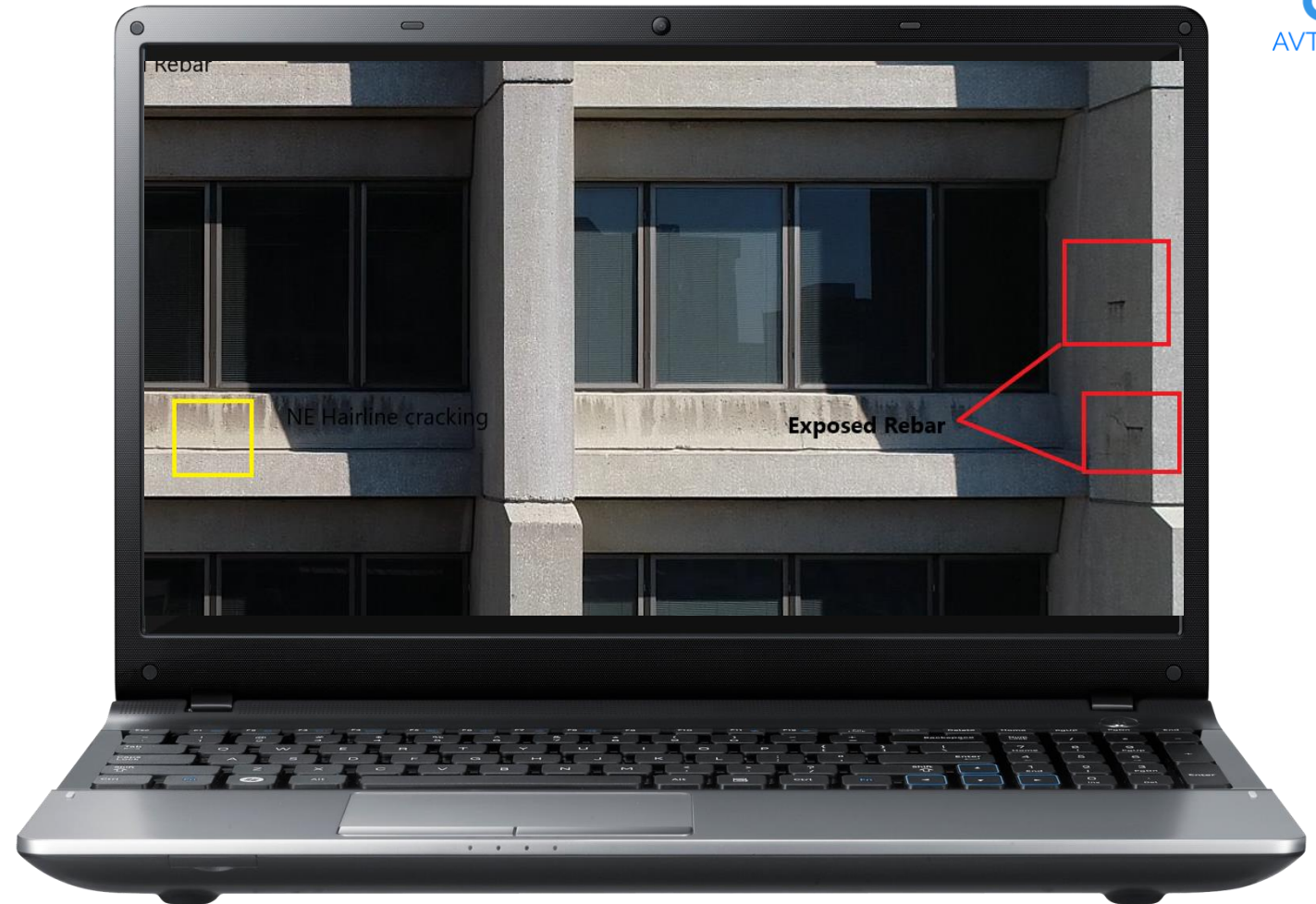


DroneDeploy



What Can A Drone Facade Inspection Identify?

- Hairline Cracks
- Large spalling exposed rebar
- Efflorescence
- Structural damage
- Loose, missing or damaged facade elements
- Where to focus remediation efforts



Traditional scaffolding systems, swing stages and bucket trucks can run as high as 100K dollars while compounding the problem of cost and safety. Scaffolding processes can sometimes take months, we get the job done in hours!

Conducting Façade Inspections with AVT

- Conducting façade inspections with drones will save valuable time and reduce safety concerns associated with scaffolding and catch baskets
- 3D models are generated from unique photogrammetry software for side-by-side comparison
- Issues found during the aerial vertical inspection can be immediately shared and communicated to engineers on the ground
- Keep reports digital and easily sharable with your entire team
- Annotate 3D models using real-time imagery



← **Our Process**



Plan 3D route with AVT



Upload mission to drone



Fly & capture data



Provide Deliverables

What Can You Do With an Aerial Vertical Facade Inspection Report?

- Create inspection reports in a fraction of the time that you would manual inspections
- Capture the perfect data set using our vertical flight planner
- Game changing 3D model reconstructions of your project
- Conduct safe and efficient inspections using our aerial drone platforms in 4K video and HD imagery
- Take aerial inspection reports and upload point clouds to CAD/BIM 360 in minutes
- Generate printable and shareable PDF inspection reports that track issue, status and provide summary



Highly Accurate Measurement's

Provides easy capturing of high-resolution imagery data from vertical structures like building walls, bridges, open pit walls and others

Automated Flight

Our software automatically calculates the optimal flying path and performs the mission autonomously

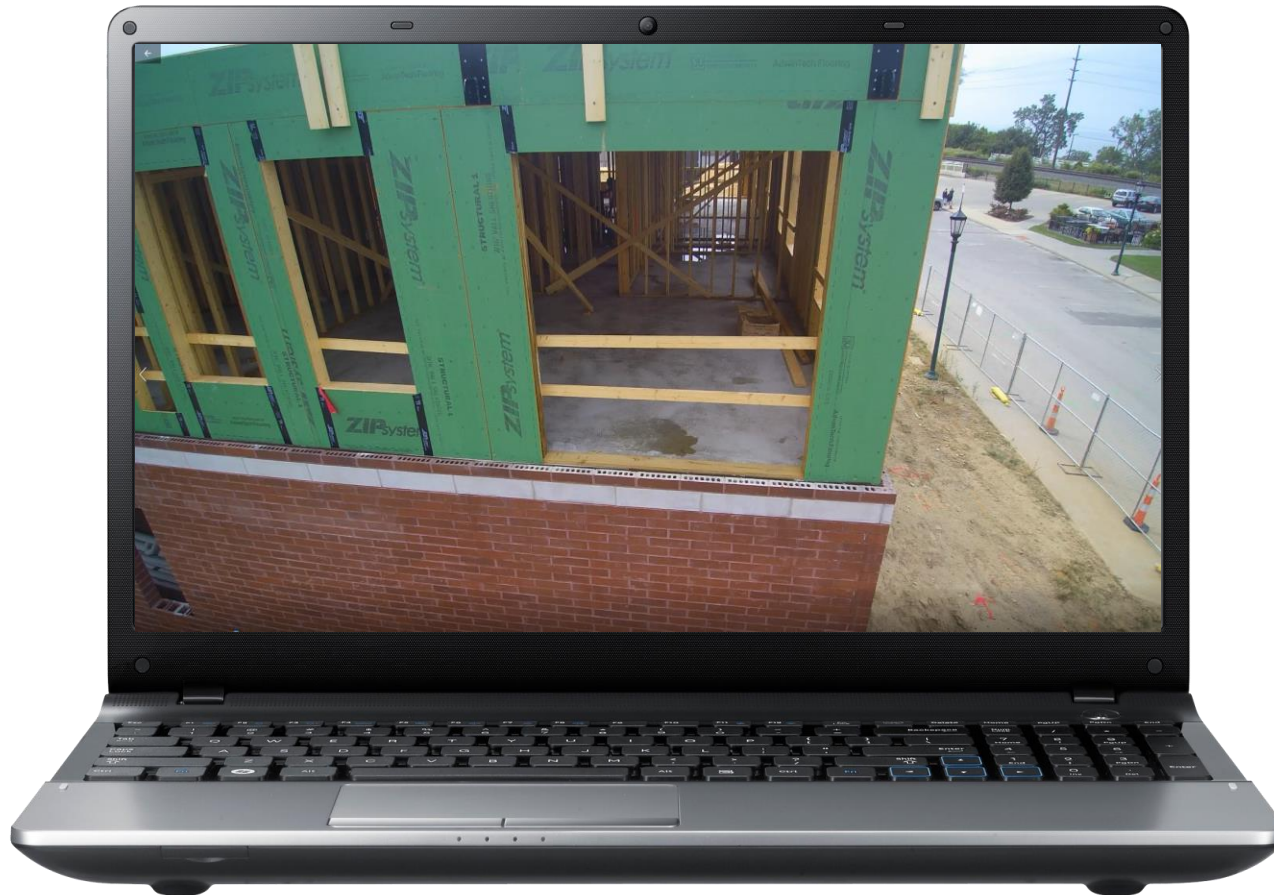
Time-efficient

Faster than traditional methods and easily-repeatable surveys at low cost

Increased Staff Safety

Improve worker and project safety with 3D flight planning and twin replication

Meeting The Needs of Our Clients



- Our focus is on the investigation, documentation and quantification of existing conditions during the inspection
- Clients use the results to present fully developed scope of work plans for budgeting, phasing, scheduling, bidding and maintenance of work
- On average we help companies save 10x their traditional inspection cost by reducing the need for scaffolding and traditional lift equipment
- All pilots are FAA part 107 certified and vetted registered operators
- Our work comes from AVT employees not subcontractors.



We help engineers and inspectors remain safe on the ground by reducing the need for dangerous scaffolding and swing chairs



Important detailed project data can be provided in less than half the time of traditional inspection methods



Faster data returns means owners and workers can begin making faster more informed decisions for budgets and maintenance repairs

Conclusion

It's extremely important to inspect the surfaces of any vertical structure to identify loose, missing, damaged or other elements that could potentially endanger individuals or other property around the building on sidewalks, roadways within a fall area.

With recent advancements in new aerial technology (drones) these needed inspection processes have been made easier for inspectors and less costly than prior methods, enabling more frequent inspections and better insights for focused remediation. We at AVT Drones want to help your firm with that process.

Take The Next Step and Request a Quote or Schedule Service – Email: Flywithavt@avtdrones.com - Phone: 216-545-1397