



# BUILD INSIGHTFULLY WITH AERIAL TECHNOLOGY

Improve each phase of the AEC project lifecycle with aerial imagery, 3D, and AI content

# Transform AEC workflows across the project lifecycle with current, high-resolution aerial imagery and geospatial intelligence.

Technology is reshaping how we go about accomplishing our day-to-day operations. From ordering supplies to connecting with team members, many of our business affairs can be tackled with enhanced efficiency and convenience thanks to technology. Think about your daily routine: commuting to worksites, assessing properties of interest, logistical planning for project equipment and crew. Aerial technologies from Nearmap make all this easier to manage.

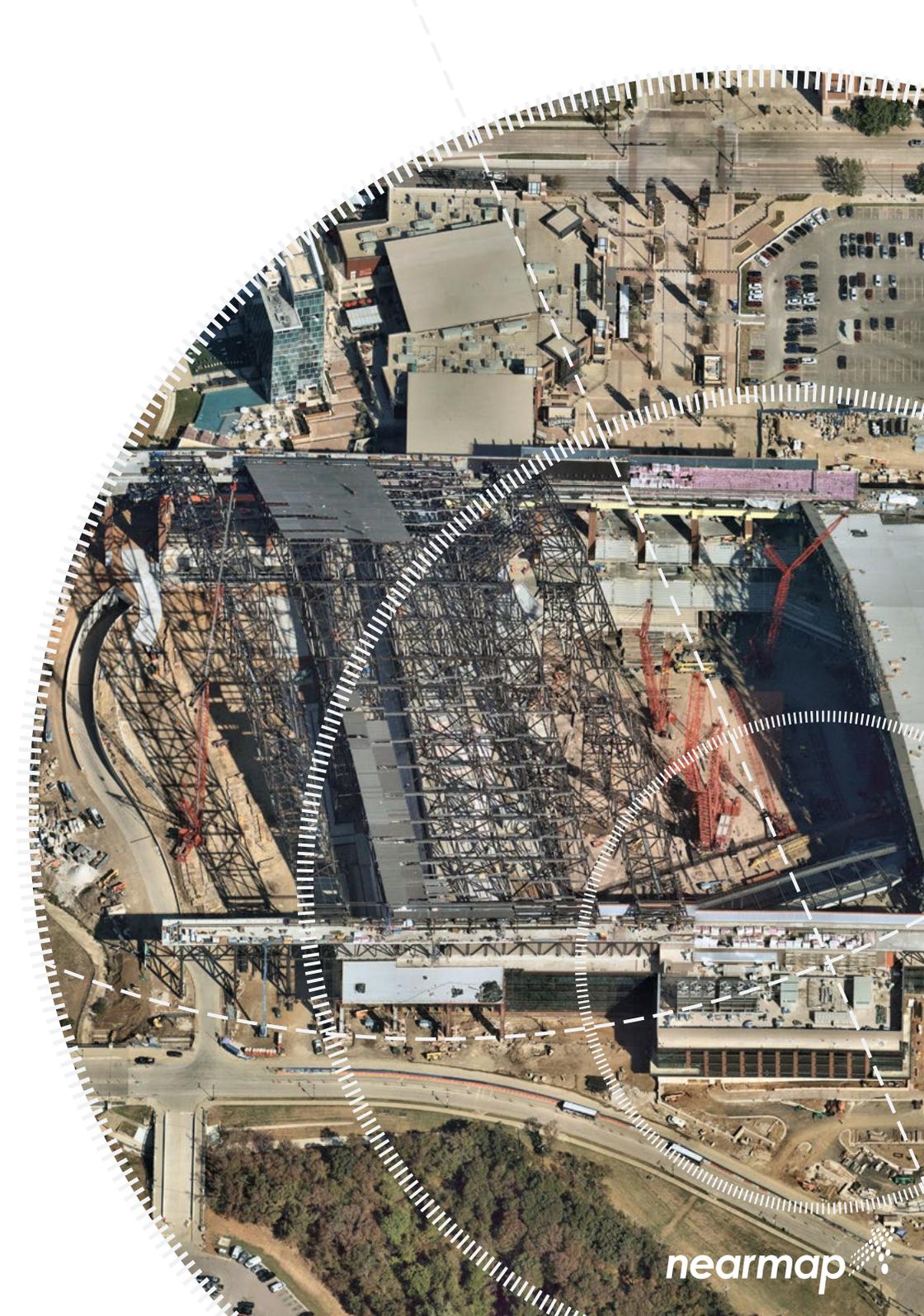
Using premium geospatial content, leading mapping software, and seamless integrations, access truth on the ground remotely from any connected device. You can readily access up-to-date and historical, high-resolution imagery – no more costly bespoke flyovers to ensure accurate information – to reliably plan, manage, and maintain projects.

Aerial imagery and related content used within industry-leading CAD and GIS applications from Autodesk, Bentley, and Esri, provide more than a top-down view of project sites; they offer robust location intelligence such as remote measurement, design, and analytics capabilities. The Nearmap geospatial content stack includes aerial imagery, 3D (textured mesh, point cloud, DEM, DSM, and TrueOrtho), and AI datasets that enable project visualizations and geospatial analysis. Our unique content stack continues to evolve to meet business needs and cross-industry support for infrastructure projects.

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## AERIAL IMAGERY: TURN DATA INTO INSIGHTS

Despite the name, aerial imagery isn't just about what you see; its true value is found in the data contained within the photos. High resolution aerial imagery

combined with advanced features (e.g., 3D and AI datasets) give you multiple vantage points to uncover actionable insights that enhance how you propose, plan, design, and build.

Today's leading AEC businesses integrate aerial imagery and related content with CAD and GIS software to gain

a competitive advantage with more comprehensive location intelligence. Using a complete stack of geospatial content throughout the AEC project phases enables increased speed and precision.

Once integrated into AEC workflows, Nearmap geospatial content can help with:



### PROPOSALS

Remote field assessment, project estimation and feasibility studies



### PLANNING

Concept development, 3D visualization, project planning and design



### DESIGNING

Supports creating digital twins and building information modeling (BIM)



### BUILDING

Stakeholder communications, project documentation and reporting

Let's see how top firms are fusing their industry expertise with our location intelligence to streamline operations for faster, better execution of their projects from start to finish.



## THE AEC PROJECT LIFECYCLE: PROPOSAL

When researching projects, you want to learn more about the historical and current site conditions, potential hazards or challenges, and any details that could affect the proposal. At Nearmap, we have a routinely updated image library that is timestamped and archived so you easily track temporal changes to sites of interest — effectively knowing the past to predict the future work environment.

Our vertical imagery and 3D visualization tools augment AEC project proposals by enabling teams to create engaging project designs from the very start. Proposals can now include preliminary scenario evaluations, cost estimates, and change detection using current, crystal-clear imagery.

# HNTB

## HNTB PROPOSALS GET A VISUAL BOOST

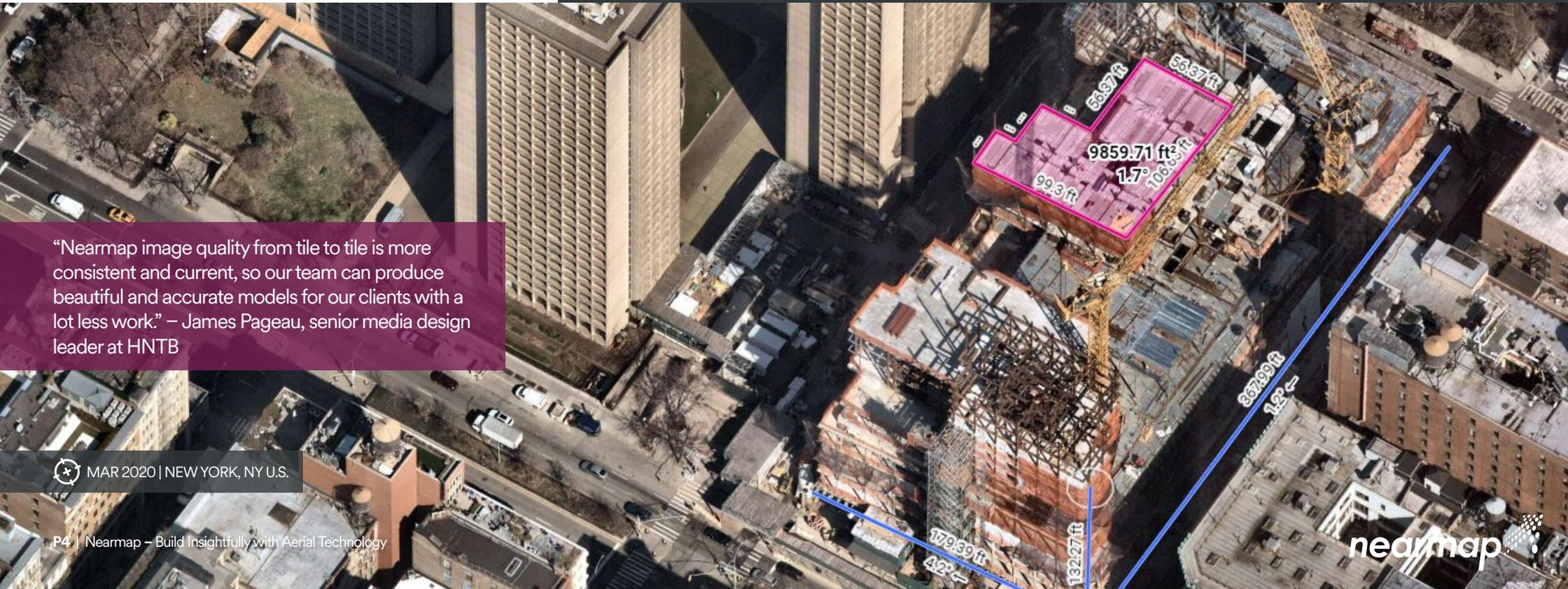
Previous imagery solutions required the HNTB team to put in more work to model and retouch animations because the resolution wasn't clear enough.

“To win business, we have to be faster, more efficient and do it better,” said James Pageau, senior media design leader at HNTB.

HNTB implemented Nearmap high-resolution imagery to replace the pixelated photos of their previous provider. Equipped with lifelike, HD-quality visuals and models HNTB now impresses their

clients with beautifully detailed proposals that help them clearly envision the overall project result.

Contextual models also are used to educate surrounding property owners. Project managers can use the models as visual aids to illustrate different project stages, staging areas, and equipment logistics so local business owners and residents are informed and can plan accordingly.



“Nearmap image quality from tile to tile is more consistent and current, so our team can produce beautiful and accurate models for our clients with a lot less work.” — James Pageau, senior media design leader at HNTB



## THE AEC PROJECT LIFECYCLE: PLAN

After a project has been scoped or a bid is won, it's time to finalize designs, evaluate logistics, and plan a build. Traditionally, this required regular site visits. Aerial imagery and 3D content within MapBrowser, a CAD or GIS application saves firms the travel time and expense with remote access to the required location data, including initial material takeoffs, measurements, and quantity surveying estimates for accurate labor, materials, and equipment costs.

Obliques, ortho imagery, and immersive 3D visualization tools give you the freedom to explore sites of interest from any connected device. Tour a neighborhood virtually, see around and between tall structures, even get an understanding of topography. With up-to-date aerial imagery, you can plan with confidence knowing what you see digitally is what's there physically.



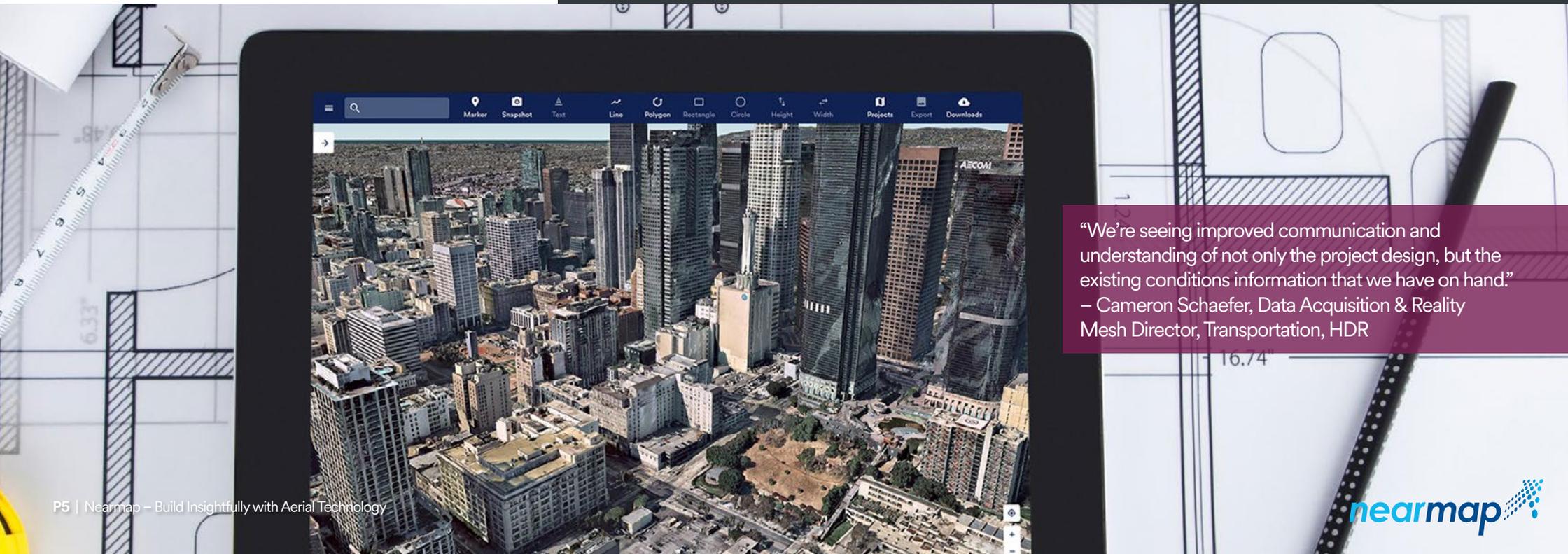
## HDR IMPROVES PLANNING WITH BETTER COLLABORATION

Like many firms, HDR spends significant time studying locations for new projects. This can take away focus from design, which is a hallmark of the company. As HDR embarked on a multiyear build for Iowa's highways, its team needed to gather contextual data without compromising creative talent and eating up valuable resources.

With 3D-textured mesh from Nearmap, HDR gains a ready view of the built environment so team members can dive straight into conceptual planning and public outreach. Photorealistic 3D reality models

paint clear pictures of project surrounds. Updated frequently, the models allow for more strategic and confident designs.

Now teams can understand how a massive transport system will interact with surrounding infrastructure and townships in much more detail — not relying solely on LiDAR flights.



“We’re seeing improved communication and understanding of not only the project design, but the existing conditions information that we have on hand.”  
– Cameron Schaefer, Data Acquisition & Reality Mesh Director, Transportation, HDR

## THE AEC PROJECT LIFECYCLE: DESIGN

Integrating aerial imagery and 3D datasets can help inform concept designs and answer questions. What will line of sight be like from the new building's seventh floor? Is there room to accommodate a crane's turning radius? What are the best access routes to place heavy vehicles? Where are trees and vegetation?

Having this information at your fingertips helps accelerate project deliverables.

The latest research shows that around half of all builders use BIM in project planning visualization and tracking construction phases, and over 60% use it to assist with clash detection\*. BIM delivers a detailed 3D view of the built environment to document and verify designs, so you can quickly visualize the building and the impact of decisions before breaking ground and generating design documentation for construction management.

When you combine BIM with GIS, project stakeholders gain better insight into how a new infrastructure project will affect the surrounding structures, meet government regulations, and how those existing structures potentially could affect the building (e.g., noise pollution, green space, transport access, and shadow impact). This helps firms manage data efficiently and accurately, increase visibility into the supply chain, and provide more accurate and timely information to field crews.

\*<https://www.statista.com/statistics/1020765/uses-bim-construction-sector-us/>



### STANTEC DESIGNS WITH INCREASED CONFIDENCE

When civil engineer and BIM specialist Justin Racelis joined Stantec in 2013, the organization's transportation business unit relied heavily on older aerial datasets and satellite imagery. Tracking site conditions and measuring progress often took longer than needed due to limited data — resulting in additional trips to the field.

“The data we had was minimal, so there was lots of guesswork and many trips to the field,” Racelis said, “every time we missed something, we would have to go out again. It took a lot of time out of the day.”

Nearmap aerial imagery provides Stantec the data they need to improve preliminary design and planning workflows — while also eliminating the need for repeat site visits. Further, our realistic 3D modeling offers an immersive backdrop of surrounding environments to enhance Stantec's communication with shareholders and clients.



“3D data and aerial imagery help us get the most information we need for a project without ever having to go on-site. I can see things that previously required lots of time in the field to understand. It's a much better way of working.” – Justin Racelis, Civil Engineer and BIM Specialist, Stantec

## THE AEC PROJECT LIFECYCLE: BUILD

Large projects likely involve several parties working together to move things forward. To ensure accuracy, clear communication, and productive execution, Nearmap gives teams access to the same data and eliminates departmental silos. And it serves as an easily assessable and regularly updated historical library that helps to monitor change over the course of multiyear infrastructure projects.

Using Nearmap aerial imagery during the build phase enables firms to:

- Support progress reports and validate measurements
- Audit contractor work to validate project milestones
- Dispute damage claims by referencing historical imagery
- Consult frequently updated imagery to allow iterative design as the project evolves
- Avoid costly rework by viewing what's happening on-site, without having to commute
- Plan delivery of building materials as access points shift throughout the project



### WALBRIDGE MONITORS CONSTRUCTION AT SCALE

Relying on bespoke flights to understand how projects were moving toward completion, Walbridge identified a need to improve how they gathered data as these flyovers are not the most cost-efficient option, or always feasible to conduct. When introduced to Nearmap, the benefits of our proactive capture program were instantly clear. Walbridge is now able to access quarterly refreshes of sub 3” imagery, from the East to the West Coast, without having to expend resources on coordinating flights – often a lengthy process.

Valuable resources which were previously dedicated to the planning of flyovers can now be leveraged in other areas of the business. Also, on-demand access to Nearmap imagery helps Walbridge’s key stakeholders easily gain insight into the most up-to-date truth across the project lifecycle.



“Nearmap gives us high-resolution imagery 2-3 times a year, it decreases our costs, and reduces our effort to get [drone survey] approvals. It increases our efficiency, which is what we’re about here at Walbridge.” – John Jurewicz, Director of Innovation, Walbridge

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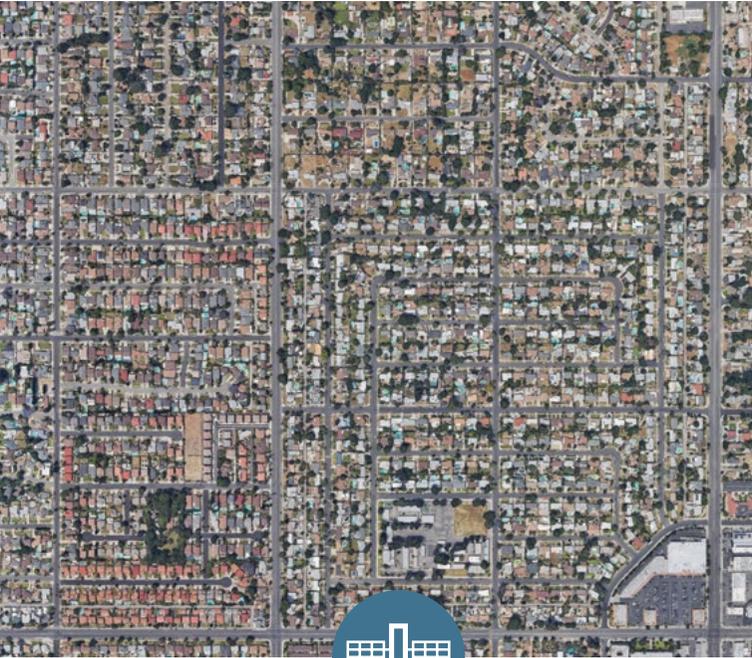
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# WHICH IMAGERY OPTION IS BEST FOR YOU?

Do satellite, drone and aerial imagery compete with or complement one another?

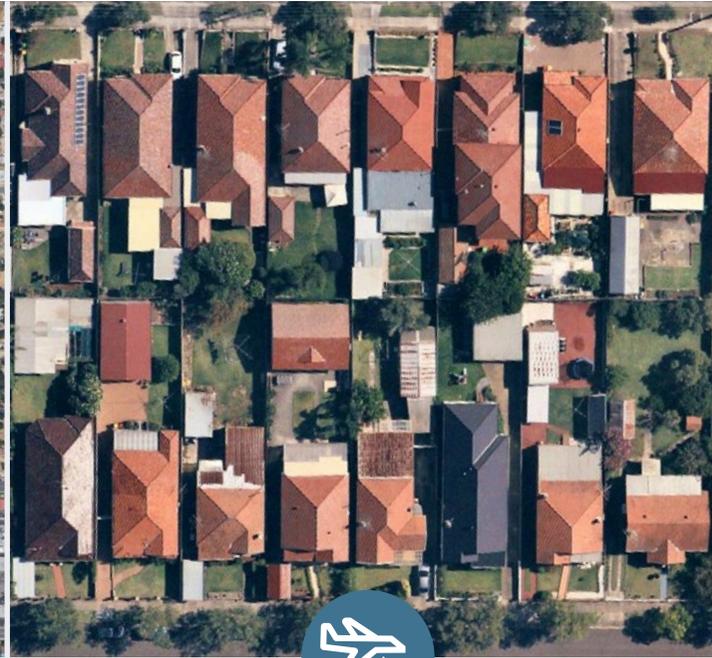


## SATELLITE IMAGERY

30cm-3m+ resolution

As a resource, satellite imagery is used by many firms. Typically captured in a vertical format, it offers global views of large areas. The height at which the images are taken provide a lower resolution, meaning less detail is available for measurements or close analysis. Because of this, satellite imagery is best for macroenvironmental and geographical evaluation.

Compared with other options, satellite imagery isn't always updated as frequently and date of capture can be difficult to determine, so you could be making decisions using outdated captures.

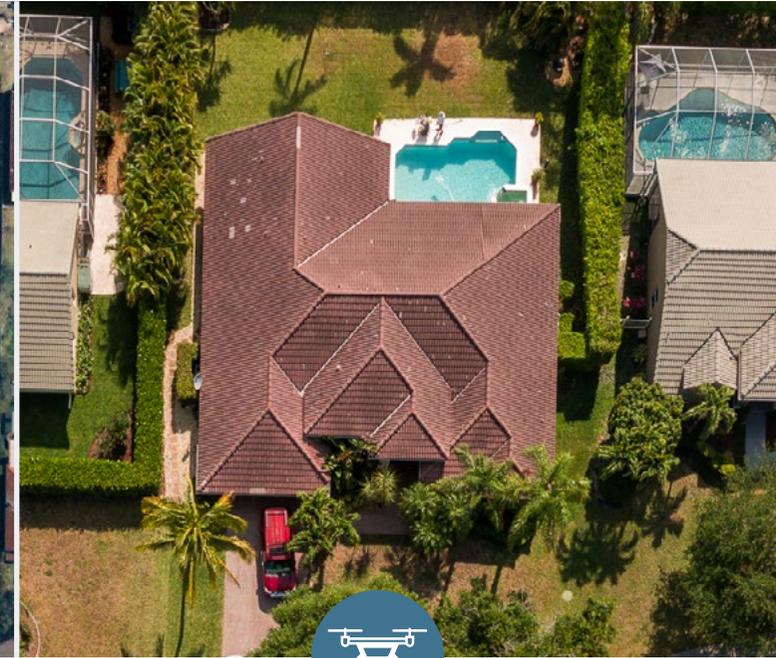


## AERIAL IMAGERY

5-30cm resolution

Content captured by plane-mounted camera systems offers coverage at a broad, regional level. Aerial imagery offers resolution high enough to capture building measurements, including slopes, footprints, and height. Frequently updated, aerial imagery allows you to monitor site and building changes over time.

Aerial imagery displays a level of detail suitable for many phases of engineering and construction, such as remote field assessment, feasibility studies, concept development, and visualizations.



## DRONE IMAGERY

Sub cm+ resolution

Drone imagery offers the highest resolution for thorough inspections and close-up evaluation of fine details. Specialized and targeted for small areas, drone imagery often requires significant financial and time investments. Further, use of drones is not possible in all situations, such as capturing data in no-fly zones.

# NEARMAP FOR AEC OVERVIEW

Being able to clarify through visual confirmation what really exists on the ground is a key factor in why many AEC professionals rely on and choose Nearmap to support their project objectives. Whether it's measuring and inspecting project sites, identifying potential risks and hazards in the construction areas, or being better informed on design decisions without ever leaving the office, Nearmap offers real world solutions.

Our comprehensive catalog of recent and historic location content drives project efficiency by reducing unnecessary site visits in the early stages of the project lifecycle.

## How does Nearmap bring insights to you?



### NATIONWIDE COVERAGE

Our extensive capture program covers over 1,740 urban areas across the U.S., including over 80% of the population, with more than 308,000 unique square miles surveyed annually.



### PROACTIVELY UPDATED LOCATION CONTENT

We capture large urban areas up to **three times per year**, so you always work with up-to-date aerial imagery. With years of historical imagery available in most coverage areas, AEC professionals can gain a deeper understanding of a location to validate, verify, and generate insights more efficiently and effectively.



### FEATURE PACKED DATASETS

Our content stack includes: 3D textured mesh, point cloud, DEM, DSM, TrueOrtho, and AI packs that facilitate workflows and analysis. These unrivaled features provide the most relevant and accurate source of truth.



### SEAMLESS INTEGRATION

Can easily be integrated with third-party software, including leading design, visualization, and GIS platforms for the AEC industry (e.g., Autodesk, Bentley, Esri).



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# NEARMAP MAPBROWSER: OUR ADVANCED MAPPING APPLICATION

Over 90% of Nearmap customers use MapBrowser to supercharge their workflows with its advanced features and sharp imagery.

## EASY TO VIEW FROM WHEREVER YOU WORK

Through MapBrowser, you can quickly search any area of interest by address, latitude/longitude, or with a direct URL — right within your browser. Seamlessly alternate between basemaps and content types for an easy perspective shift, gain deeper context by adding road overlay or AI-derived insights, and confidently detect change over time with an image archive dating back to 2014.

## MARK UP AND MEASURE

Intuitive tools for mark up and measurement means you can store critical project details in one central location. From measuring line, width, and height to understanding specific dimensions, MapBrowser has you covered.

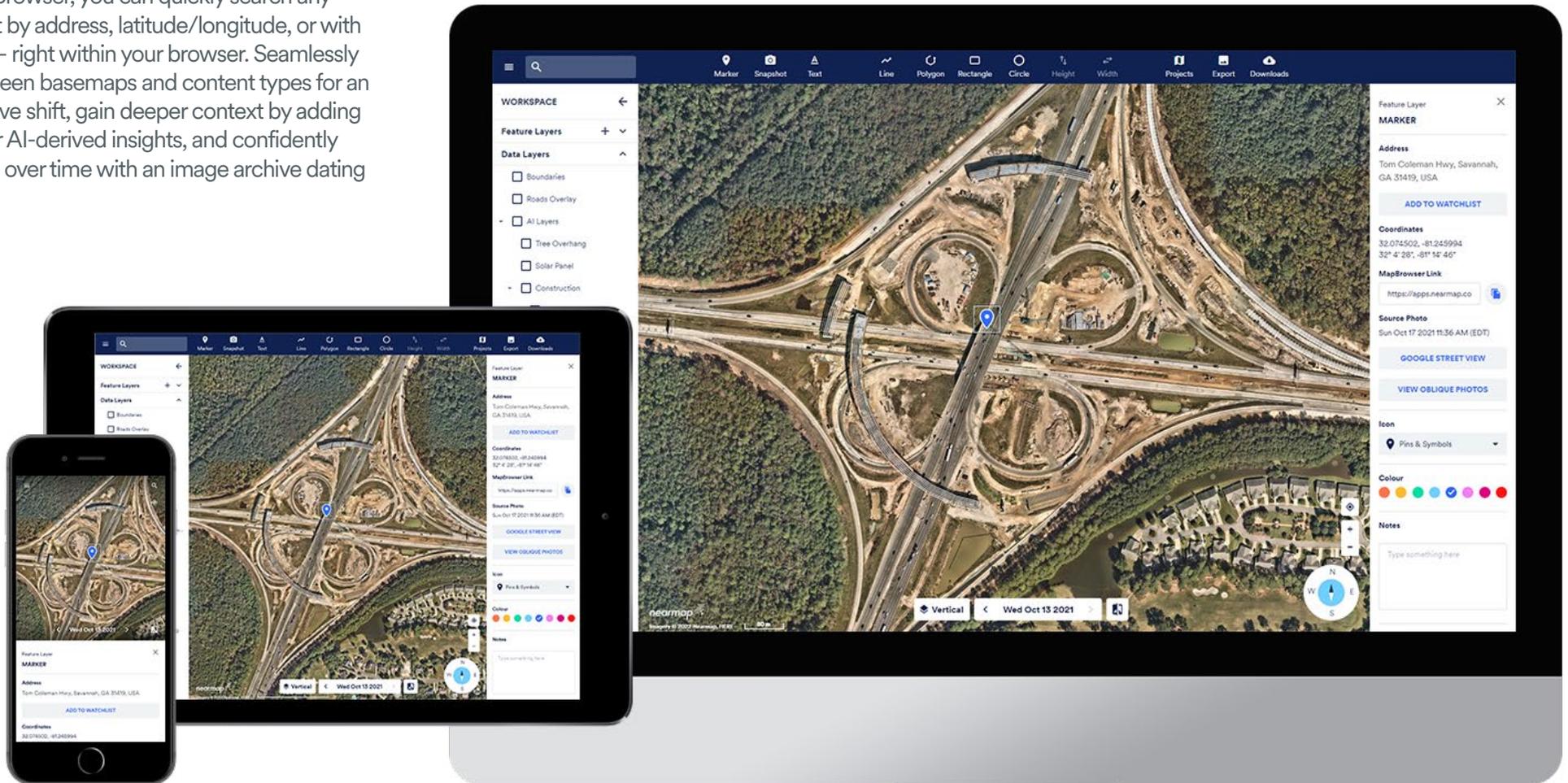
## SAVE AND DEFINE YOUR BEST MADE PLANS

Project workspaces let you add content-rich information to any location, which you can save, organize, and revisit whenever you need.

Update your projects as many times as required, and see change over time with imagery that's updated up to 3 times per year.

## OPTIMIZE YOUR WORKFLOW WITH SEAMLESS INTEGRATIONS

Export content, from Nearmap vertical imagery to 3D and AI, using an efficient export tool and import into your preferred third-party application to start leveraging Nearmap content and geospatial intelligence for insights and various use cases in a timely manner.



# ABOUT NEARMAP

Founded in 2007, Nearmap is a leading aerial imagery and geospatial technology provider, delivering content at scale and covering large urban areas throughout the United States, Australia, New Zealand, and Canada.

Nearmap is one of Fast Company's 10 Most Innovative Companies of 2020 and is a Sydney-headquartered technology pioneer listed on the ASX 200. Combining patented plane-mounted camera systems, a world-class survey operations capability, and an automated photogrammetry pipeline to provide imagery within days of capture, Nearmap provides quality at scale — covering large urban areas to empower businesses to perform virtual site visits and make critical business decisions without leaving the office.

Each day, Nearmap helps AEC firms conduct virtual site visits for deep, data-driven insights — enabling informed decisions, streamlined operations, and significant cost savings.

[www.nearmap.com/AEC](http://www.nearmap.com/AEC)



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