

INNOVATOR

FALL 2023



GEOD
AN **MFS** AFFILIATE

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Answer Due by Midnight on Friday, December 1, 2023

GEOD Provides

- 3D Laser Scanning
- Aerial Photography /
Photogrammetric & LiDAR Mapping
- Drone Surveying
- Land Surveying
- Subsurface Utility Markouts

As of October 2021, GEOD Corporation became an affiliated company of MFS Consulting Engineers & Surveyor, DPC (MFS Engineers & Surveyors), a multidiscipline, MBE/DBE/SBE certified civil engineering firm. Visit www.mfsengineers.com.



WHAT'S NEW?

New sUAS Mounted Full Frame 35mm Metric Camera

Geod recently acquired additional lens options for our sUAS mounted full frame 35mm metric camera, the DJI ZENMUSE P1.

With this increased flexibility, we can now choose the appropriate lens for each project, allowing us to fine tune our data capture to best suit our client's needs. All lenses are calibrated per job with the camera body to maintain the highest accuracy.



At Geod, we don't just use drone pilots to capture our data, we use an in-house ASPRS Certified Photogrammetrist to properly select the imaging equipment (down to the lens), along with the appropriate camera settings, to yield the best possible sUAS digital imagery for stereo compilation, extraction and orthophoto production."

MFS Engineers & Surveyors Ranked Best Place to Work in NJ

We're thrilled to announce that MFS Engineers & Surveyors has been ranked #32 on NJ Biz's Best Places to Work in NJ list!

This incredible recognition is a testament to the hard work, dedication, and unwavering teamwork of our amazing staff. At MFS, we're more than just a workplace; we're a family that supports and values each other every step of the way.

We're immensely proud of this achievement and grateful to our outstanding team for making MFS a truly exceptional place to work. Thank you for your dedication and commitment!

Cheers to our fantastic team, and here's to many more years of success and camaraderie!



In picture (l to r): Michael Mudalel Principal Engineer, Jeff Clark, BD/Marketing Manager, and Paul Shim, Principal Engineer



EMPLOYEE SPOTLIGHT

Kenneth Kramer, GEOD Business Development

"I have been in the sales field since 1998, and I can tell you that it has always been satisfying to make the customer experience a happy one. Nobody wants an unhappy customer!"

- *Kenneth Kramer*

In the dynamic world of business development, success often hinges on the ability to establish and nurture relationships with customers. One individual who has taken on this challenge with enthusiasm is Kenneth Kramer, the Business Development Manager at GEOD.

Kenneth joined GEOD just six months ago, bringing with him a wealth of experience in sales and a strong commitment to customer satisfaction. As the Business Development Manager, his primary responsibilities include developing relationships and establishing rapport with both new and existing customers. His aim is to drive new business opportunities while ensuring the continued satisfaction of the company's current clients.

To gain a comprehensive understanding of the company's operations, he ventured into the field with each department. This hands-on approach allowed him to familiarize himself with the intricacies of GEOD's services and provided him with the confidence to engage effectively with primary customers.



With a career in sales dating back to 1998, Kenneth has always been inspired by the idea of making the customer experience a positive one. He firmly believes that in the world of business, nobody desires an unhappy customer. His commitment to ensuring customer satisfaction has been a driving force behind his career choices, including his current role at GEOD.

While Kenneth hasn't yet pinpointed a favorite project at GEOD, he hints at an upcoming endeavor with the New Jersey Turnpike Authority that has piqued his interest. He anticipates that this project will test the

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SPOTLIGHT *CONTINUED*

company's limits due to its unique nature, promising an exciting and challenging opportunity for the team.

Beyond his professional life, Kenneth leads a vibrant personal life. On his days off, he never stops moving. He values spending time with friends and family above all else, cherishing each moment as if it were his last.

For the past three decades, Kenneth has found solace and excitement in the open road. He shares a deep passion for riding motorcycles, particularly his trusty Harley-Davidson. Though this year has presented its challenges, Kenneth remains dedicated to his love for motorcycling, eagerly awaiting the next opportunity to hit the open road with his riding buddies.

Kenneth has a loyal companion named "Kosmo," a 90-pound Boxer. While Kosmo's bark may be imposing, Kenneth assures us that his canine friend's heart is as big as his frame, exuding a lovable and

goofy charm that brings joy to Kenneth's life.

Kenneth's commitment to his fellow veterans shines through his involvement with organizations like the Disabled American Veterans and the Combat Veterans Association. As a Combat Veteran himself and a member of various veterans' groups, Kenneth's support for these causes comes naturally, reflecting his unwavering dedication to those who have served our country.



It's Fall Flying Season!

LET'S GET *Flying* 

The Fall flying season refers to the period when Summer ends and before Winter arrives, when aerial mapping and surveying is at its most effective. During this time, the weather is generally mild, and the trees are bare, making it easier to access and survey.

Call GEOD at 973-697-2122 to discuss your aerial photogrammetric needs today!



INNOVATOR



FROM THE FIELD

NYCTA Escalator Survey

Manhattan, New York

NYCTA requested GEOD to perform survey services at the West 4th Street Station, located in Manhattan NY, and Sutphin Station, located in Queens NY. The services included the establishment of survey control for both stations following the NYCTA 2SR survey standards and performing an “as is” survey of six escalators (two being located at the West 4th St. Station and the remaining four located at the Sutphin Station). The “as is” survey of the escalators was performed utilizing a combination of conventional surveying and 3D Terrestrial Scanning and included both upper and lower landings, upper and lower escalator pits and motor rooms. To begin the survey, a survey of the escalator tread nose points and floor elevations was performed, this data was analyzed and calculations were made to establish the upper and lower working points. These points would be the reference for all the additional survey data. The survey would then be made of the pits to identify the lifting hooks, sprinklers, smoke alarms, etc.

The survey of the motor room was then performed to identify electric panels, gear box, motor mounts, etc. Planimetric and profile drawings were then prepared for each escalator showing the mechanical and support systems relative to the working points. This information was to be utilized for the replacement of the existing escalators.





FROM THE FIELD

Design Services for Contract No. T100.580 Replacement of Turnpike Str. Nos. E112.95A and E112.95B OPS T3826

East Rutherford, Bergen County, New Jersey

GEOD was responsible for the mapping and land surveying services to support the preliminary engineering and final design for the replacement of structures E112.95A & E112.95B in East Rutherford, Bergen County.

GEOD established a survey control network with baseline utilizing a combination of GNSS RTK and conventional surveying at the Int. 17 toll plaza and at Route 3. Pre-flight targeting was performed to facilitate low altitude photogrammetric mapping which was stereo compiled from 2.0cm GSD new digital aerial imagery. The basemapping was then field edited for obscured areas, to identify and label all utilities, and acquire rim/grate elevations on sanitary and drainage structures.

Existing sub-surface utility mark outs were surveyed. All the field data was then added to the basemapping, which was prepared at 1"=30' in NJTA spec MicroStation V8i with a SelectCAD DTM from which 1ft contours were generated. A GNSS Control Report and a Secondary Survey Control Report were prepared.

All of the data was processed to NAD 83(2011) NJ2900 State Plane Coordinate System horizontally and to the North American Vertical Datum of 1988 (NAVD 88) with digital tie sketches and a traverse baseline drawing of the survey control in CAD.





FROM THE FIELD

Route 55 Over West Oak Road (Country Route 681)

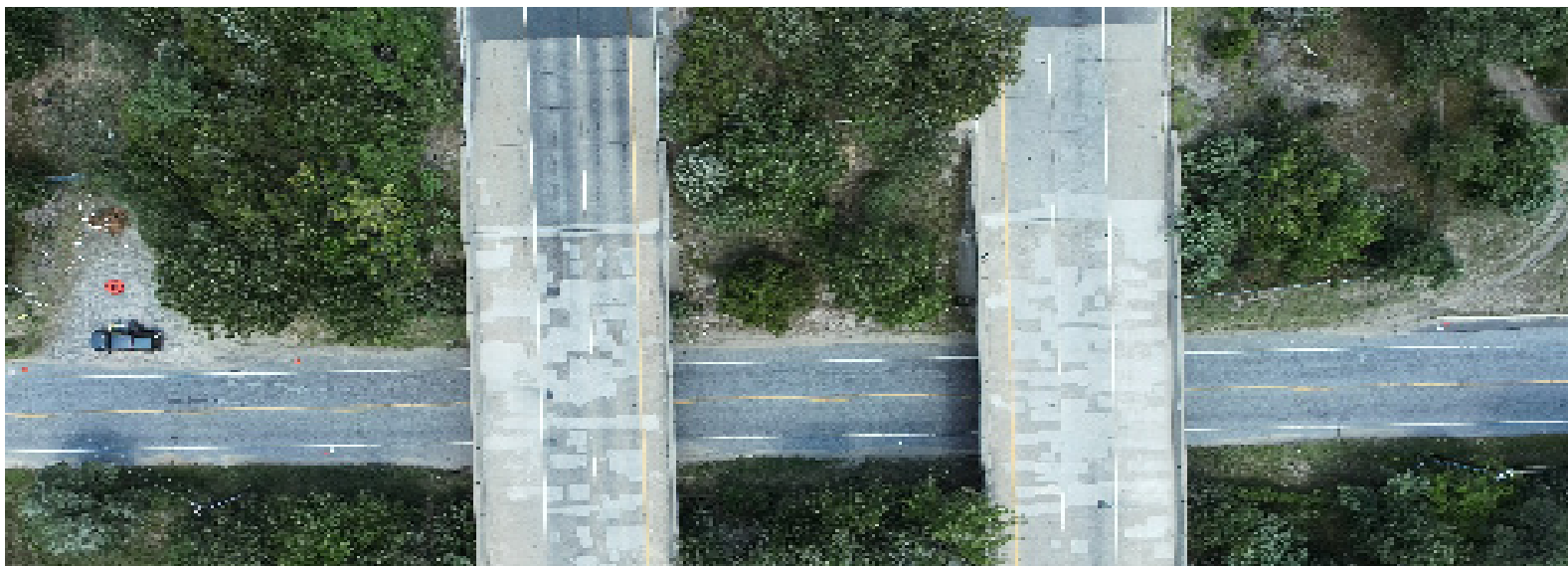
Vineland, New Jersey

GEOD was contracted to provide NJDOT Level 2 mapping for approximately 35 acres in Vineland, NJ. The corridor mapping job consisted of a mile long stretch of roadway along NJ Route 55 centered on the West Oak Road overpass at a width of ~250'. A smaller corridor of mapping on West Oak Road was also required at a length of approximately 1,300', centered at the overpass, at a width of ~200'.

NJDOT had established that this bridge was structurally deficient and in need of remediation, so they requested topographic mapping of the surrounding travel corridor. GEOD chose to leverage its aerial mapping division for this effort. The deliverables were 1"=30' planimetric mapping (all visible), a ground surface DTM, an orthophoto of the project area along with a comprehensive GNSS control report. These deliverables were used for preliminary remediation design and/or construction planning.

GEOD utilized a combination of traditional fixed-wing photogrammetry and sUAS based lidar data to accurately extract highly precise geospatial data within the site and provide the desired mapping. Roadway surfaces were mapped to achieve a vertical accuracy of +/- 0.1' and the adjoining area, consisting of large stands of deciduous tree cover, was mapped with the aid of sUAS multi-return lidar. Lidar returns in these areas helped complete the DTM without having to resort to traditional topographic field survey methods.

The utilization of multiple data acquisition platforms allowed GEOD to meet or exceed the project's objectives in a timely, efficient, and accurate manner. GEOD always strives to leverage the most appropriate technology to meet the standards of the mapping industry and, at the same time, generate the appropriate final deliverables for our clients.





GEOD CORPORATION

AERIAL MAPPING · LAND SURVEYING · UTILITY MARKOUTS

AN **MFS** AFFILIATE

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FALL PUZZLE

To enter, simply determine the whole integer value of A, B, C & D that works for the simple math.

$$\begin{array}{r} \boxed{A} \\ + \\ \boxed{C} \\ \parallel \\ 27 \end{array} \times \begin{array}{r} \boxed{B} \\ \times \\ \boxed{D} \\ \parallel \\ 24 \end{array} = \begin{array}{r} 48 \\ \\ 9 \end{array}$$



Email your answer to marketing@geodcorp.com by midnight on Friday, December 1, 2023.

A random winner will be drawn from the correct entries, and will receive a \$200 Amazon gift card. As always, if you are precluded from accepting such a prize, we'll be delighted to donate a check for \$200 to the charity of your choice.

Enjoy the puzzle and good luck! Of course, as always the decision of the judges is final!

Visit www.geodcorp.com for the winner and solution to the puzzle.