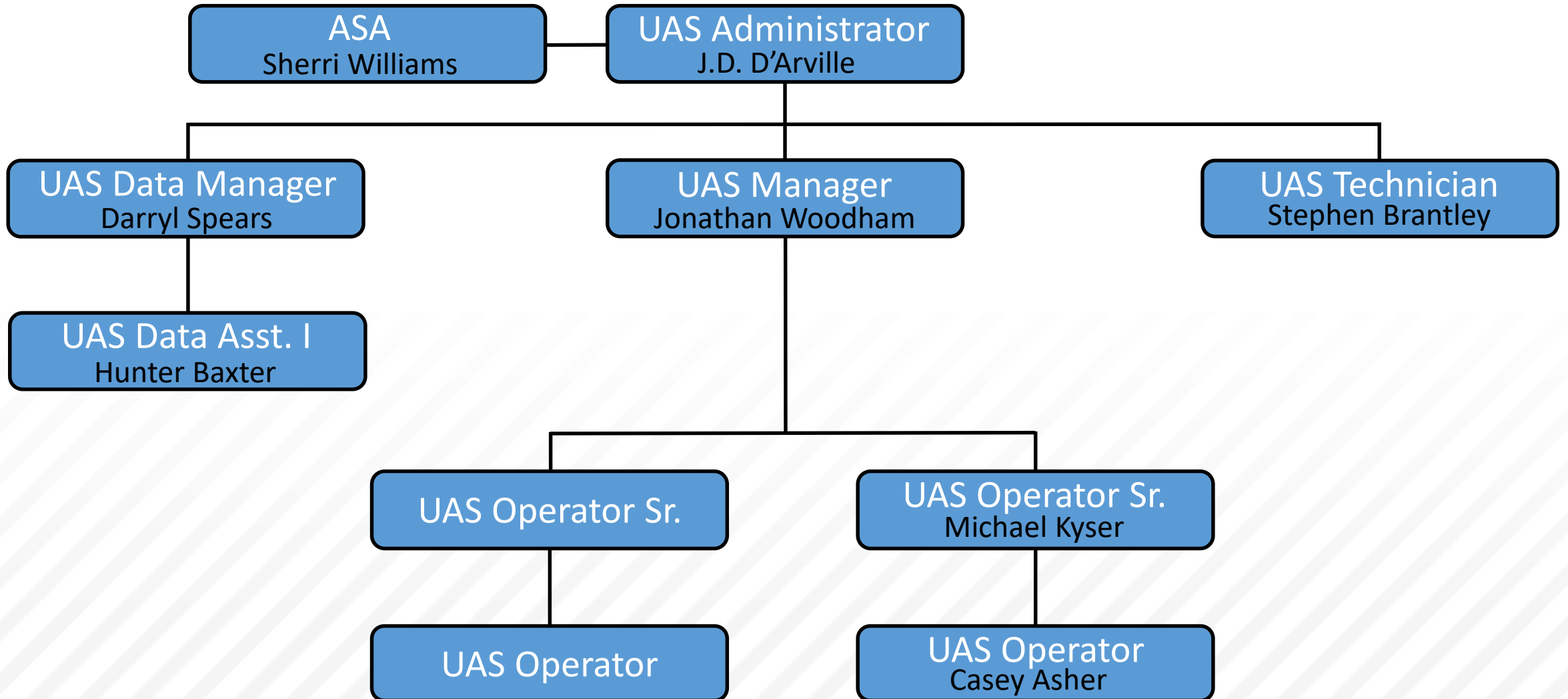


DRONE USE AT ALDOT



J.D. D'ARVILLE
UAS PROGRAM ADMINISTRATOR
ALABAMA DEPARTMENT OF TRANSPORTATION

ALDOT UAS Section



ALDOT UAS Assets

- DJI Phantom 4
- DJI Phantom 4 Pro
- DJI Mavic 2 Pro
- DJI Phantom 4 RTK
- DJI Goggles
- Sensefly Ebee
- Sensefly Airbris
- Parrot ANAFI
- Plum Case
- UAS Command Center



Software and Apps

Livingston Stock Piles



Pre-Flight and Missions

- Survey 123
 - Site Survey
 - Risk Assessment
- Emotion 3: Ebee and Al bris
- DJI Go/GS Pro: DJI Drones
- Pix4D Capture: DJI Drones & ANAFI
- Drone Deploy: DJI P4 & Mavic 2 Pro

Post Processing

- Drone Deploy
- Context Capture
- Pix4D Mapper Pro
- Virtual Processing Farm

CONSULTANTS & CONTRACTORS


My Survey

Basic Info

Date: *
Tuesday, March 3, 2020

W. O. Number: *

Location:
32°25'N 86°16'W ± 10 m



Section 1: Point of Contact

Pilot
Use only if different user than the one that signed in

Section 2: Airspace

Flight Parameters: *

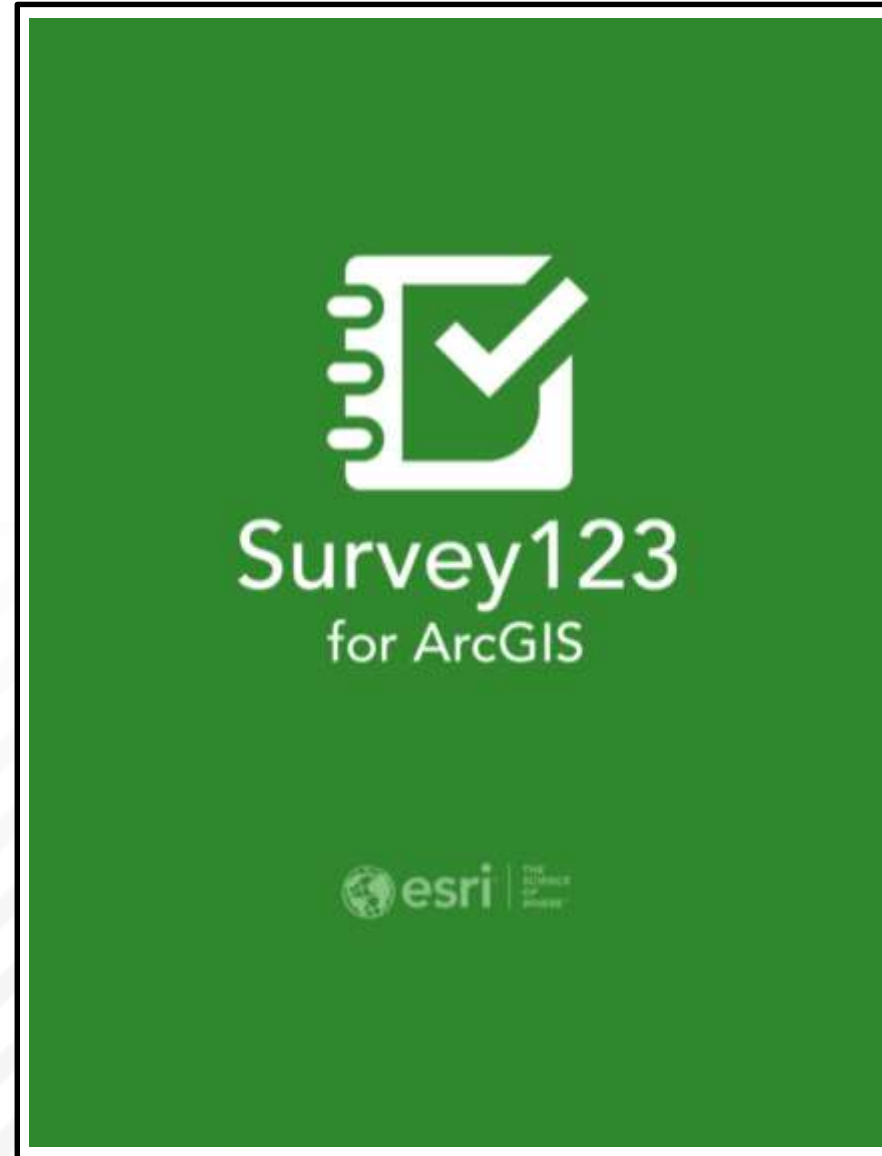
- Part 107
- Blanket COA
- Jurisdictional COA (C, D, E)

Is this operation being conducted in FAA Class "G" airspace? *

- Yes
- No

Is there an airport within 5NM of the flight area?, if yes: *


- Yes



UAS Risk Assessment Form

Basic Info

Location: *
32°25'N 86°16'W



Mission Type: *

Date: *
Tuesday, March 3, 2020 12:00 PM

W. O. Number: *

Is Operator PIC? *

- Yes
- No

Part 1: Weather

Wind: *

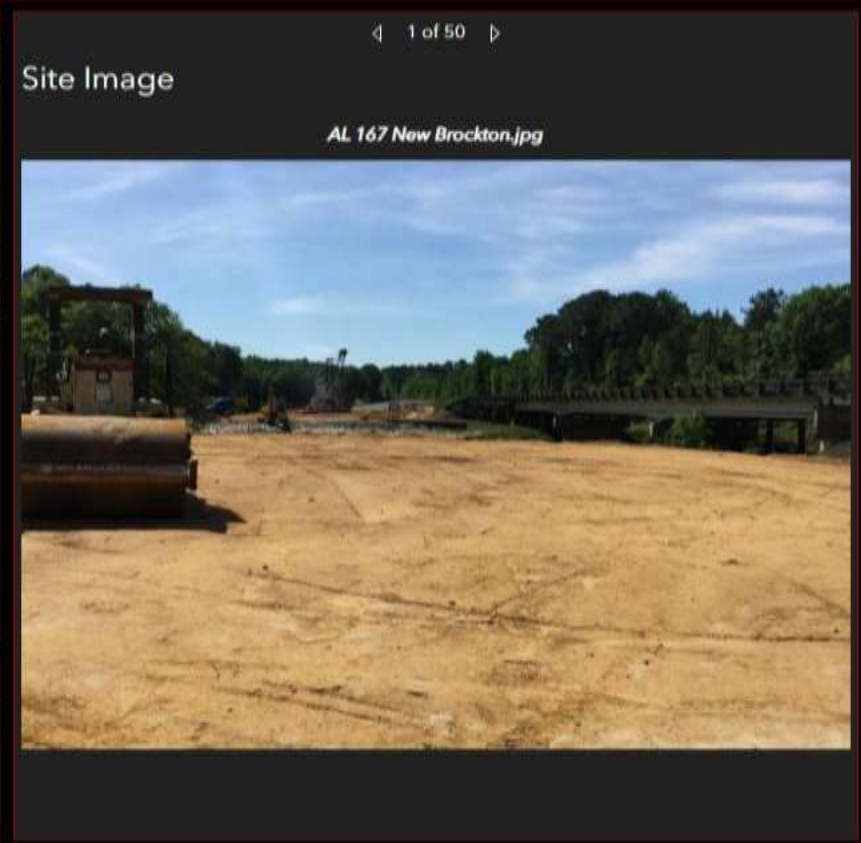
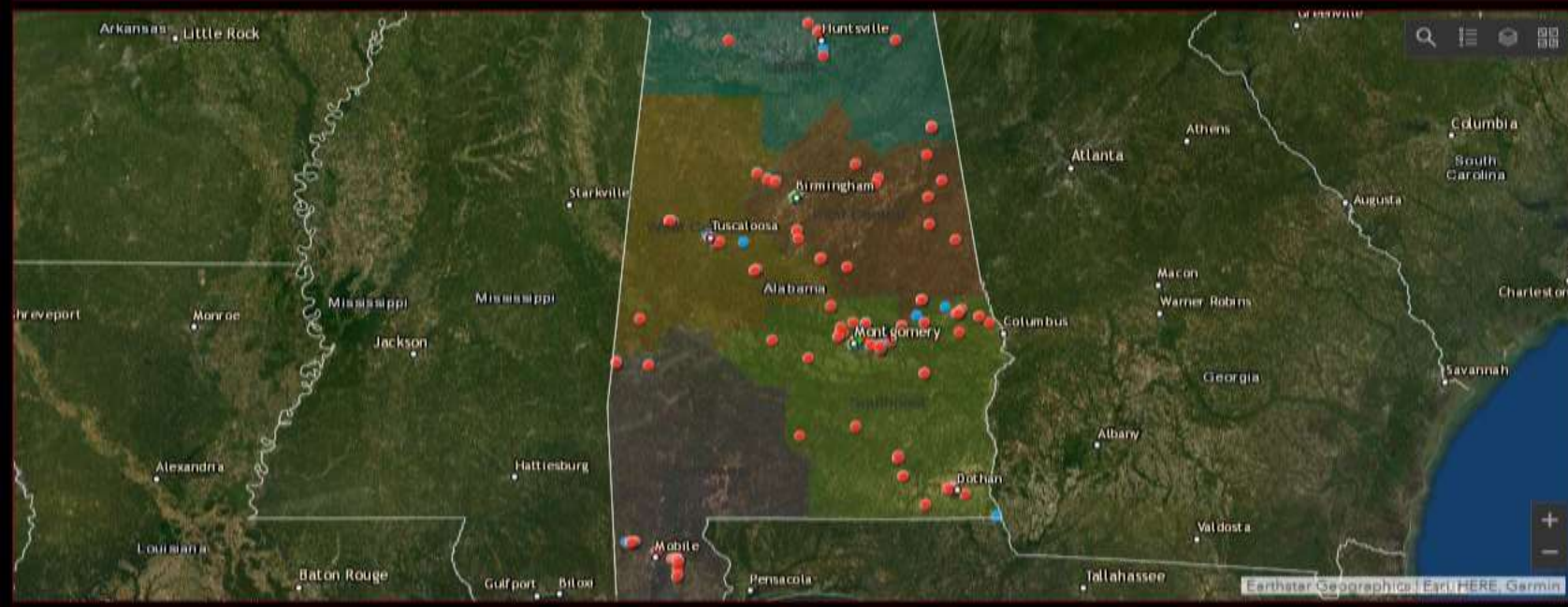
- 0-10 Knots
- 11-20 Knots
- 21-25 Knots
- Over 25 Knots

Ceiling: *

- >1000 ft

ALDOT UAS Dashboard

UAS Dashboard



Site Survey

LBW Tuscaloosa 1/21/2020 1/21/2020, 1:41 PM
I 59/20 Tusc. (387) 1/21/2020 1/21/2020, 10:14 AM
US-80 BRF-0008(851) 1/17/2020, 1:05 PM
SR-145 Waxahatchee (504) v2 1/17/2020, 9:52 AM
CBD 1-16-20 1/16/2020, 9:09 AM
Tallahassee Airport 2 1/15/2020, 9:39 AM
Mobile Bridge Test

Risk Assessment

LBW Tuscaloosa 1/21/2020 1/21/2020, 1:46 PM
I 59/20 Tusc. (387) 1/21/2020 1/21/2020, 10:36 AM
US-80 BRF-0008(851) 1/17/2020, 1:10 PM
SR-145 Waxahatchee (504) v2 1/17/2020, 9:55 AM
Mobile Bridge Testp 1/9/2020, 11:56 AM
Practice area test flight 1/8/2020, 3:50 PM
LRB M/M County Line

Work Order Link

- SR-156 Robjohn (500)_Work Order

Last update: a minute ago

Work Order Status Report COA 360 IMAGE(S) Risk Chart Survey Chart

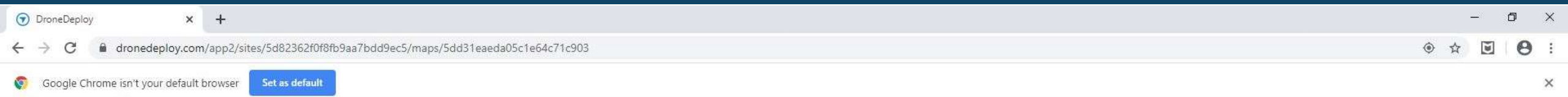
Drone Deploy Flight Planning

The screenshot displays the DroneDeploy web application interface. The browser address bar shows the URL `dronedeploy.com/app2/dashboard`. The main area is a satellite map of the Southern United States, including Tennessee, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, and Arkansas. Major cities like Nashville, Atlanta, Charlotte, and Jacksonville are visible. A blue location pin is placed near Montgomery, Alabama. In the top right corner of the map, there is a logo for 'UAS' with a blue triangle and the text 'UAS ROBOT'. The left sidebar contains a 'Projects' section with a 'Try New View' link. Below this is a 'New Project' button with a location pin icon and the text 'Pick a place to fly a drone and start gathering data'. A search bar is present below the 'New Project' button. The sidebar also features a 'DATE MODIFIED' dropdown set to 'LATEST'. A list of project folders is shown, each with an orange folder icon and a three-dot menu:

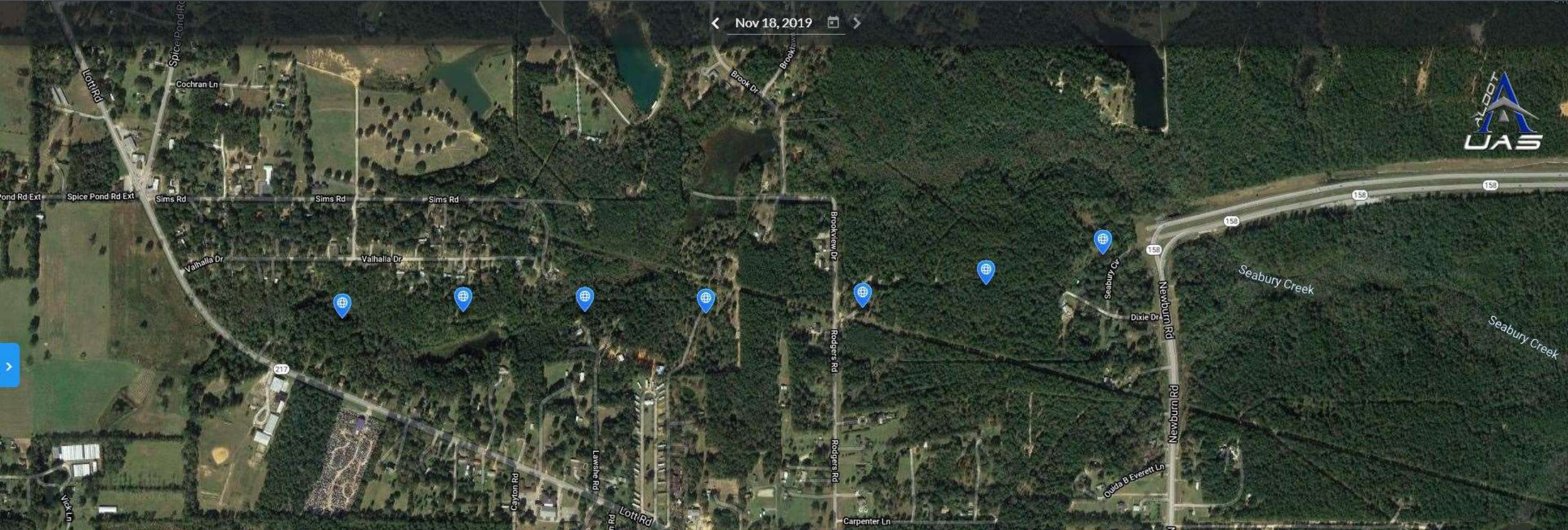
- Southwest Region (Mar 5, 2020)
- West Central Region (Mar 5, 2020)
- Southeast Region (Mar 5, 2020)
- Flight Testing (Feb 26, 2020)
- East Central Region (Feb 20, 2020)
- North Region (Feb 19, 2020)
- I-591-20 (Aug 21, 2019)

At the bottom of the sidebar is a 'HELP' link. The Windows taskbar is visible at the very bottom, showing the search bar and various application icons. The system tray on the right indicates the time is 12:56 PM on 3/5/2020.

Drone Deploy Dashboard



Southwest Region > SR 158 (508) FLY UPLOAD EXPLORE REPORT +. ⚙️

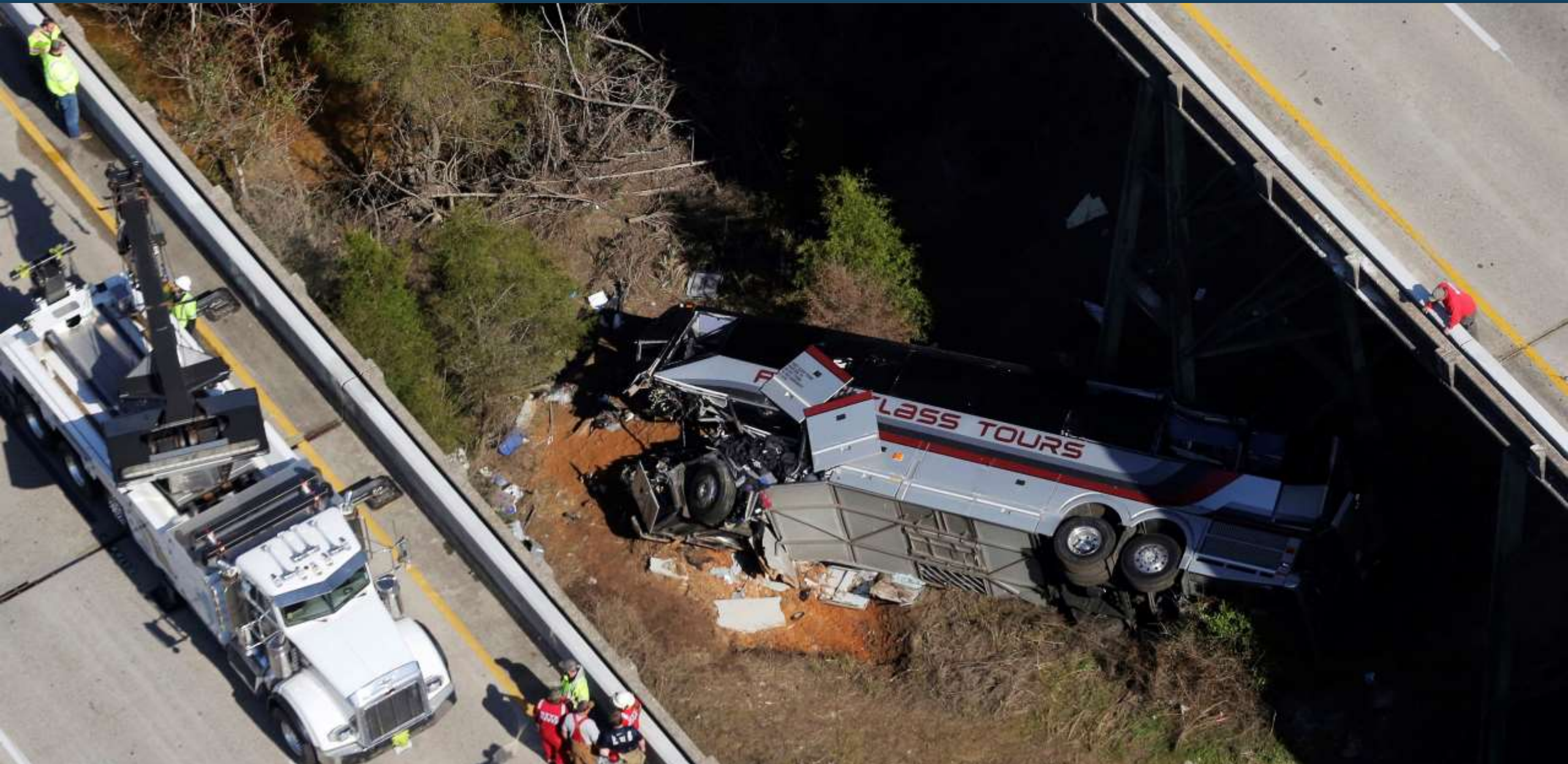


650 FLIGHTS IN 4 MONTH'S

Stockpile Volumes



I-10 Bus Crash, Loxley, AL



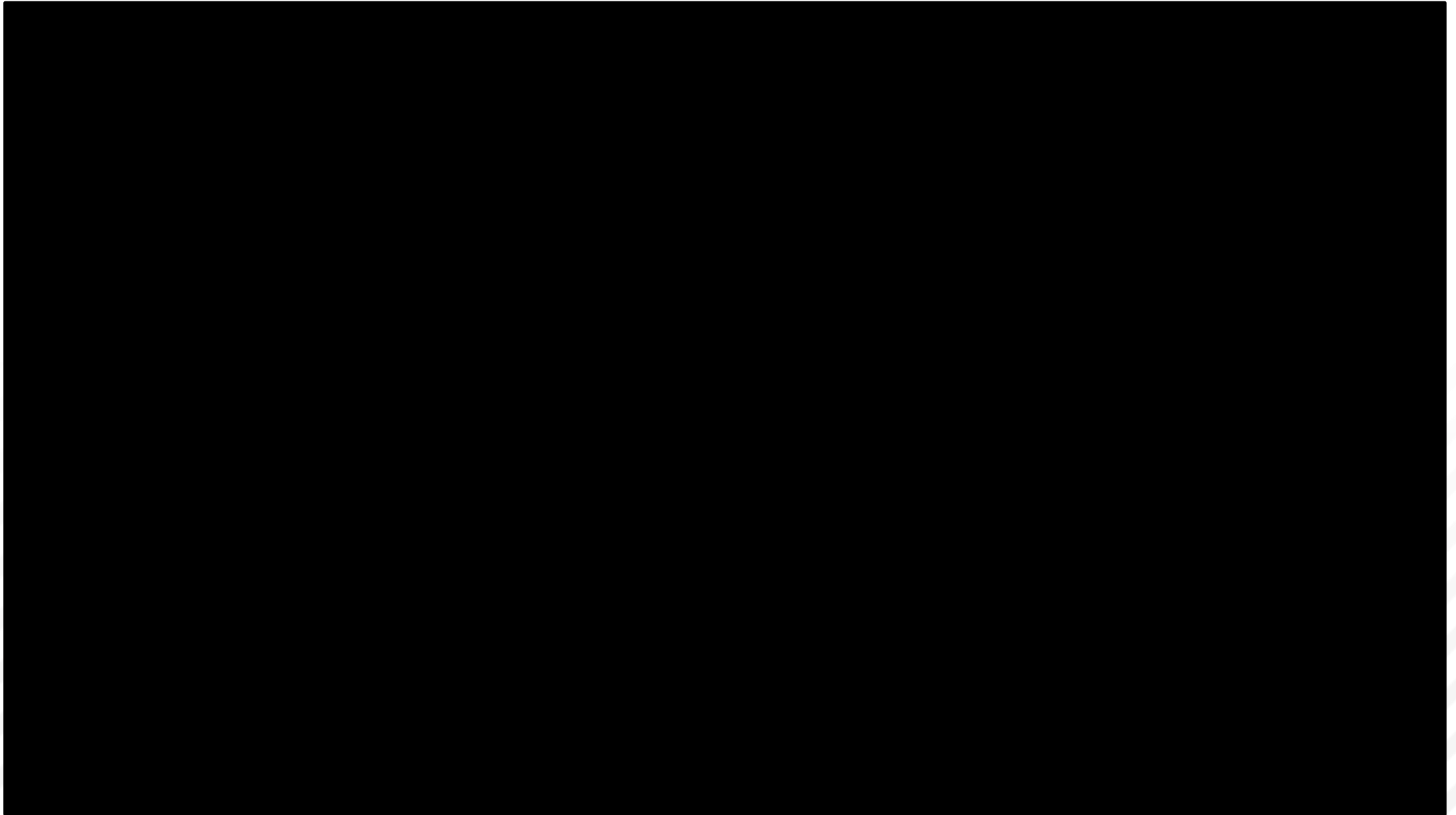
I-10 Bus Crash Model

Production_1



- 25 NADIR Images
- 60 Oblique Images
- Processed in Context Capture
- Saved as Scene Layer Package

Gordo Bypass





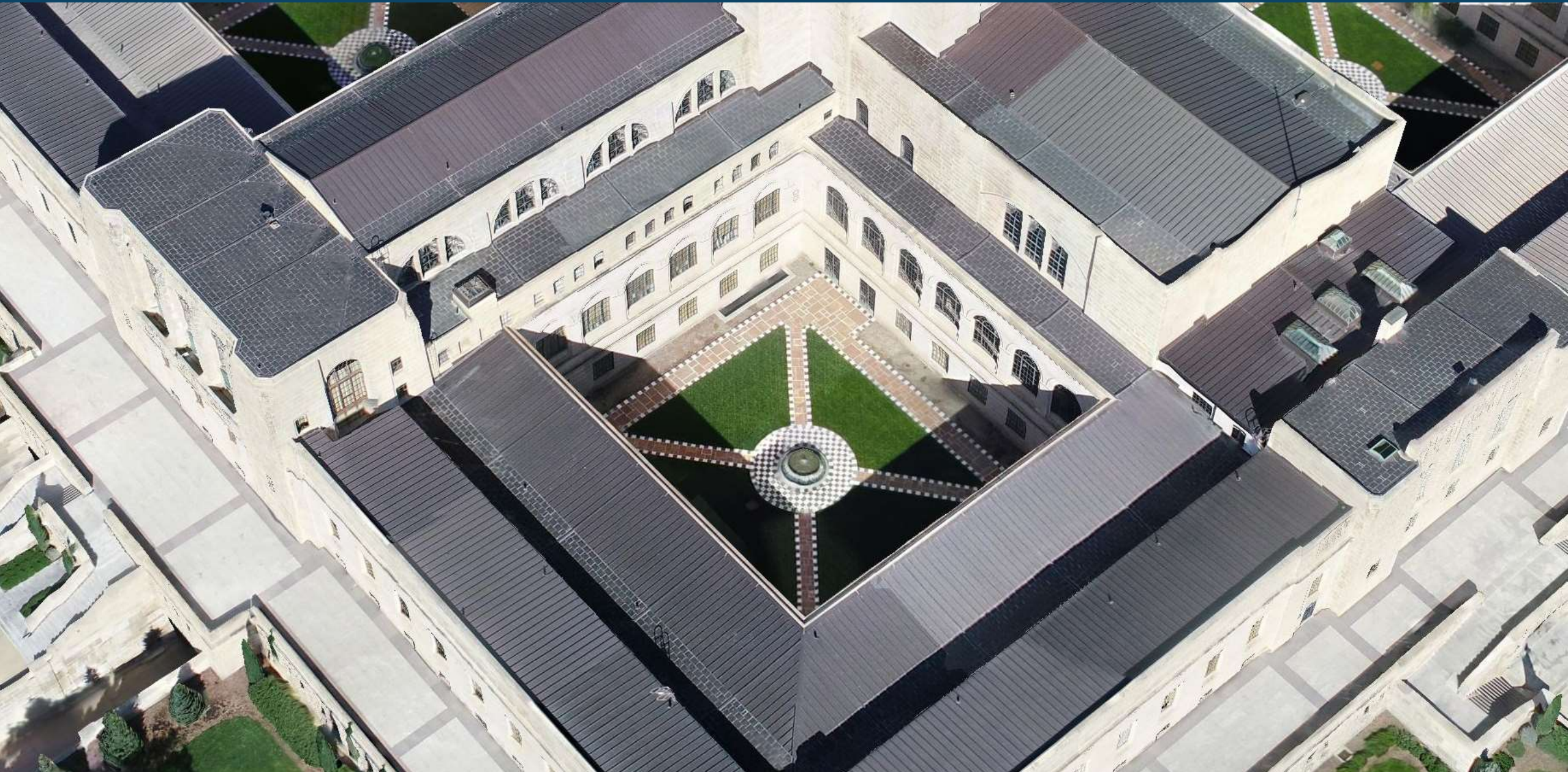
Nebraska State Capitol

NSC Reality Model

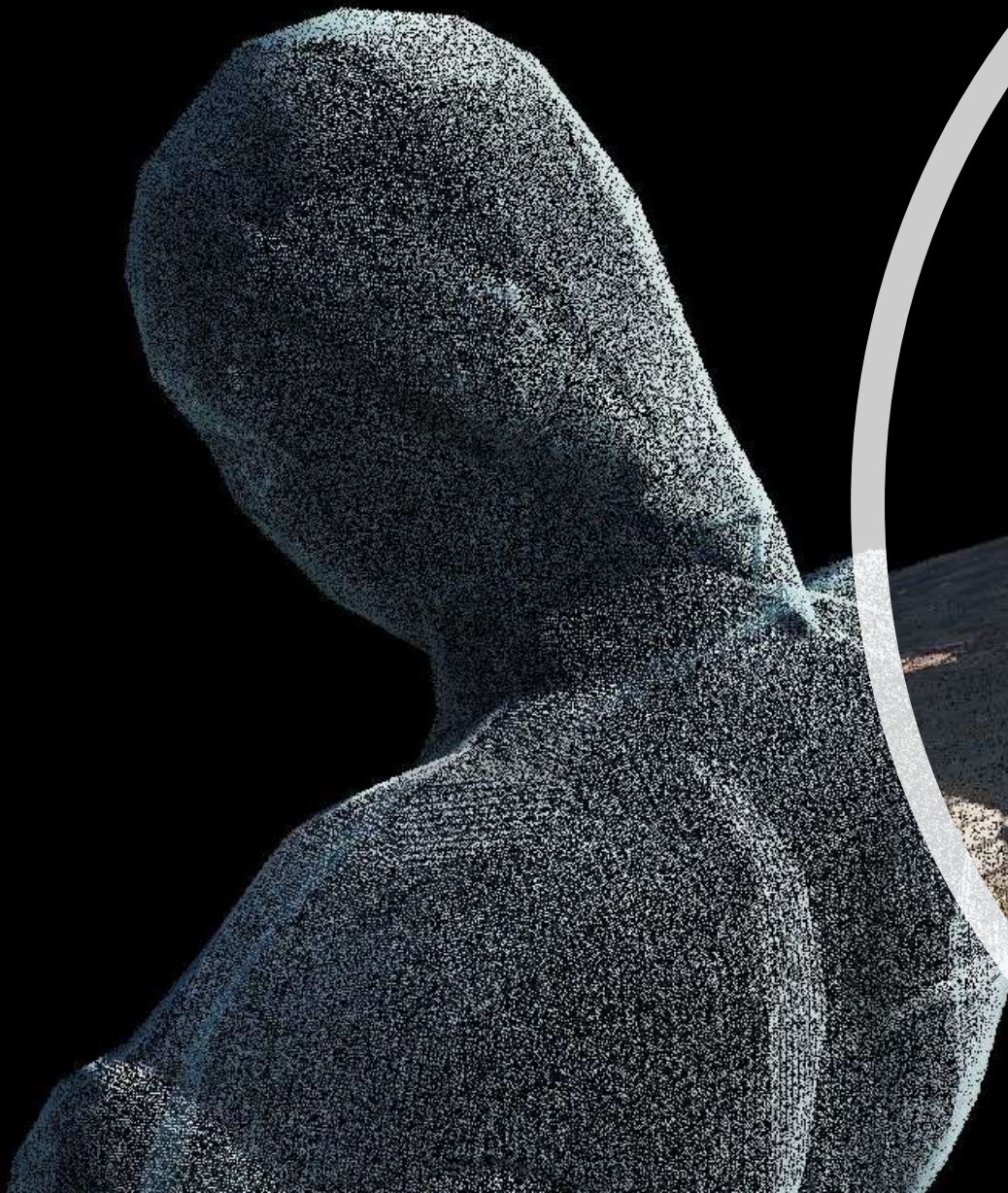


- 560 Total Images
- NADIR & Obliques
- 8 Control Points
- Processed on Laptop

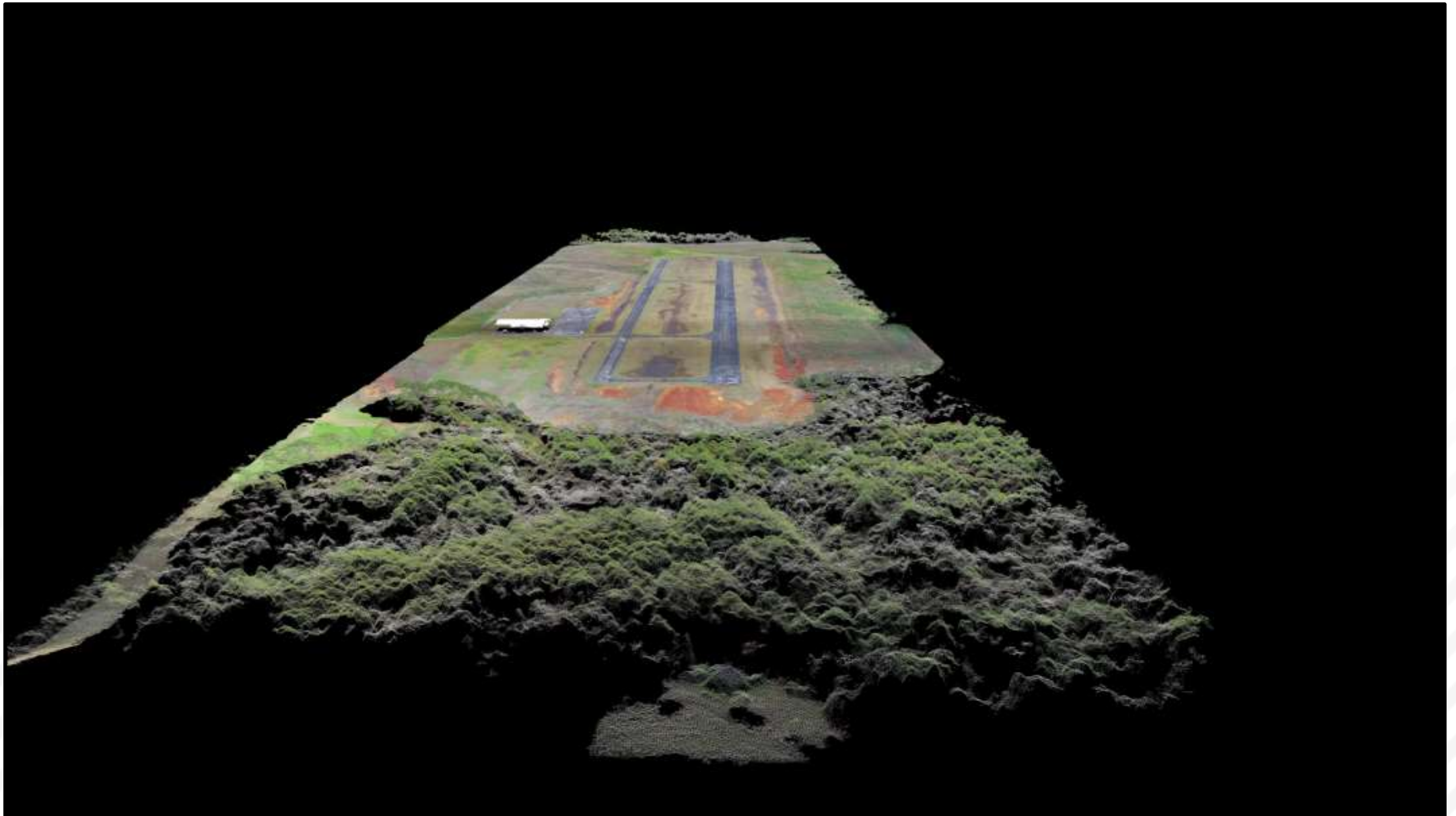
Model Level of Detail



Point Cloud



Airport Clear Zones



ARCGIS PRO



- 1107 NADIR Images
- 1120 Oblique Images
- Processed in Context Capture
- Saved as Scene Layer Package

ESRI ROADS & HIGHWAYS



UAS IMAGERY
127 NADIR IMAGES



OLD ALIGNMENT



NEW ALIGNMENT

LACEY'S SPRING, US 231

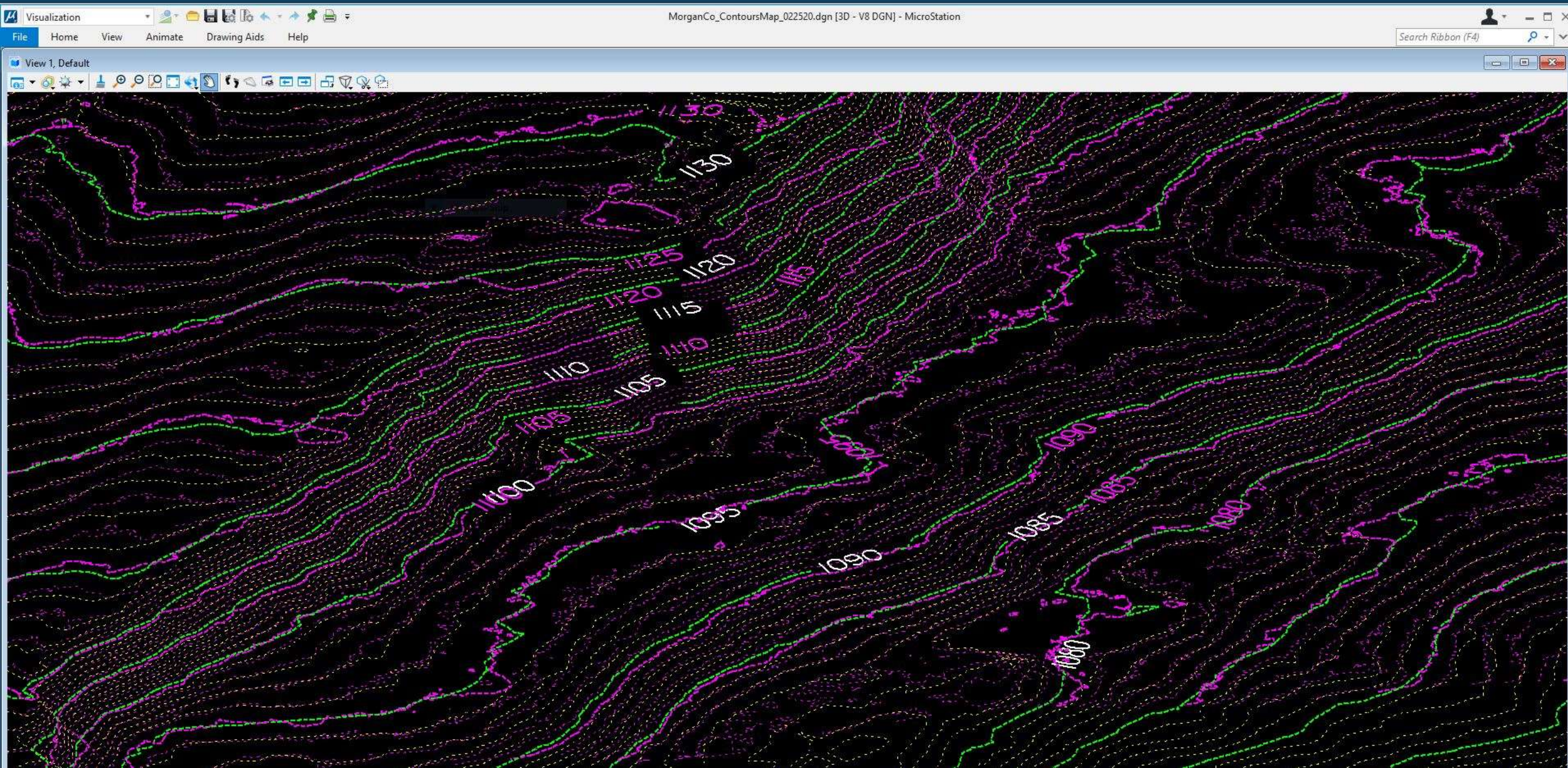


NORTHBOUND

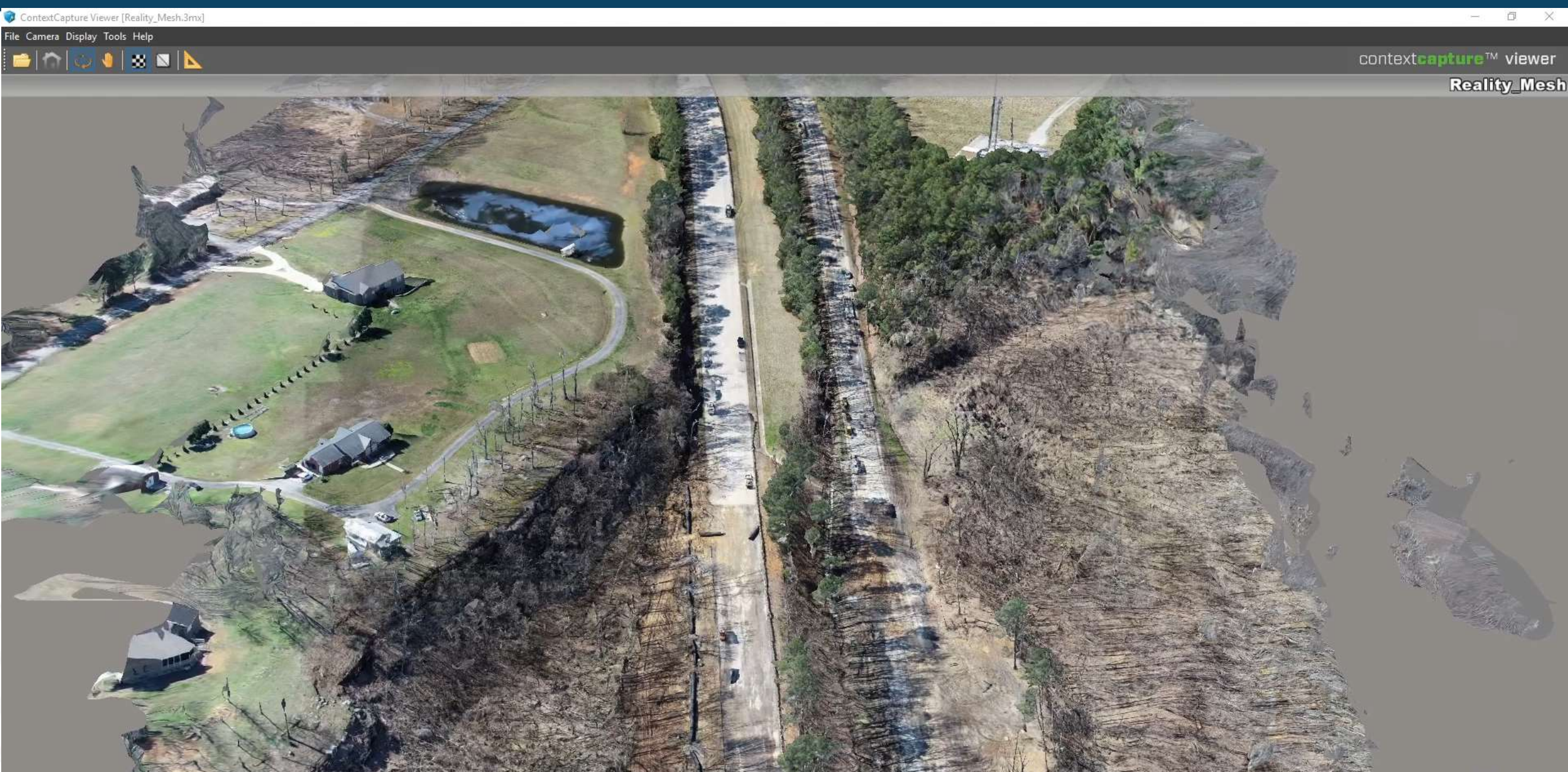


SOUTHBOUND

Aerial LIDAR vs Drone LIDAR



3D Reality Mesh





J.D. D'ARVILLE

334-242-6436

darvillej@dot.state.al.us

