



VEXCEL
DATA PROGRAM

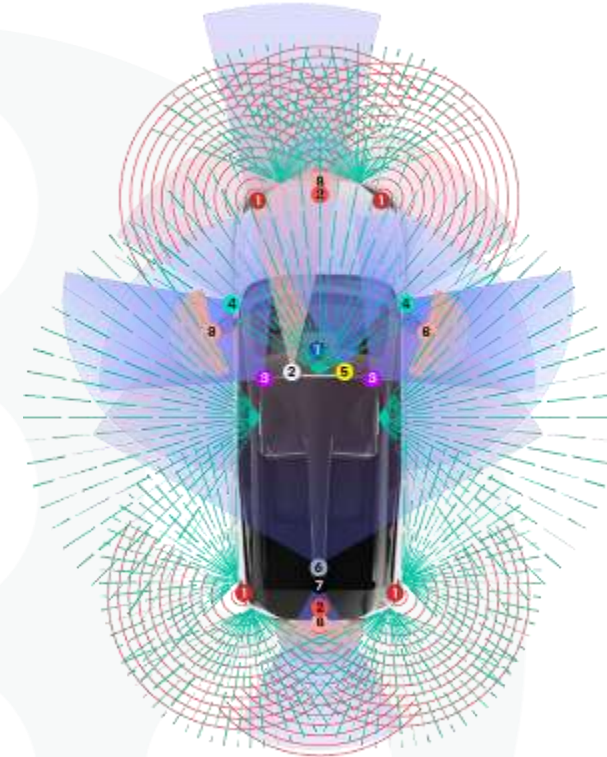
A Race to Answers: AI/ML based insights using high resolution aerial data

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Medical Lake, WA

Professional Background:

20+ Years in Remote Sensing and Geospatial Analytics
6 Years w/ Global Climate Change Science & Research
8 Years in Silicon Valley with leading VCs & Innovators
Executive Management in Fortune 500 Tech (Intel & Danaher)
Government, Academic & Commercial Solutions Development



Expanding Data Options & Insights – No “Silver Bullet”

	Coverage & Refresh Rate	Positional Accuracy & Ground Truthing	Data Repeatability; Consistent Quality	Low Cost per Mile	
Satellite Imagery	7	1	4	7	Good for broad roadway network overview info
Aerial Mapping	6	6	6	5	Expanding use of AI/ML on high resolution imagery for inventories, conditions, safety
Mobile Mapping	2	7	7	1	Ideal for engineering survey
Photologging	3	5	5	3	Good for historical records, and specific area recall
Fleet & Dashcam Data	4	3	3	4	Growing uses for street level AI/ML insights
OEM Connected Vehicle Data	5	2	2	6	Good crowdsourced telematics info for driver behaviors & safety
Manual Field Collection	1	4	1	2	Traditional approach for project specific data collections per a user spec

* Force ranking method by category

About Vexcel

30 years of photogrammetric excellence
Aerial content across 30 countries
Data histories back to 2016
Growing AI/ML library (w/80+ features)

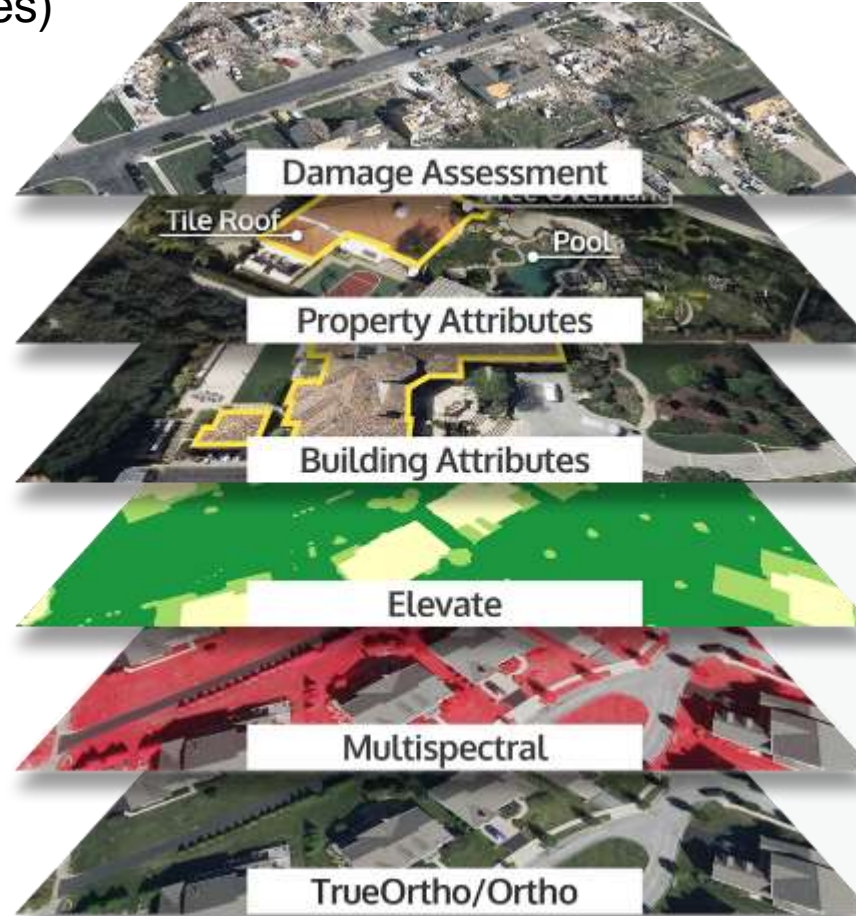
Vexcel Fleet



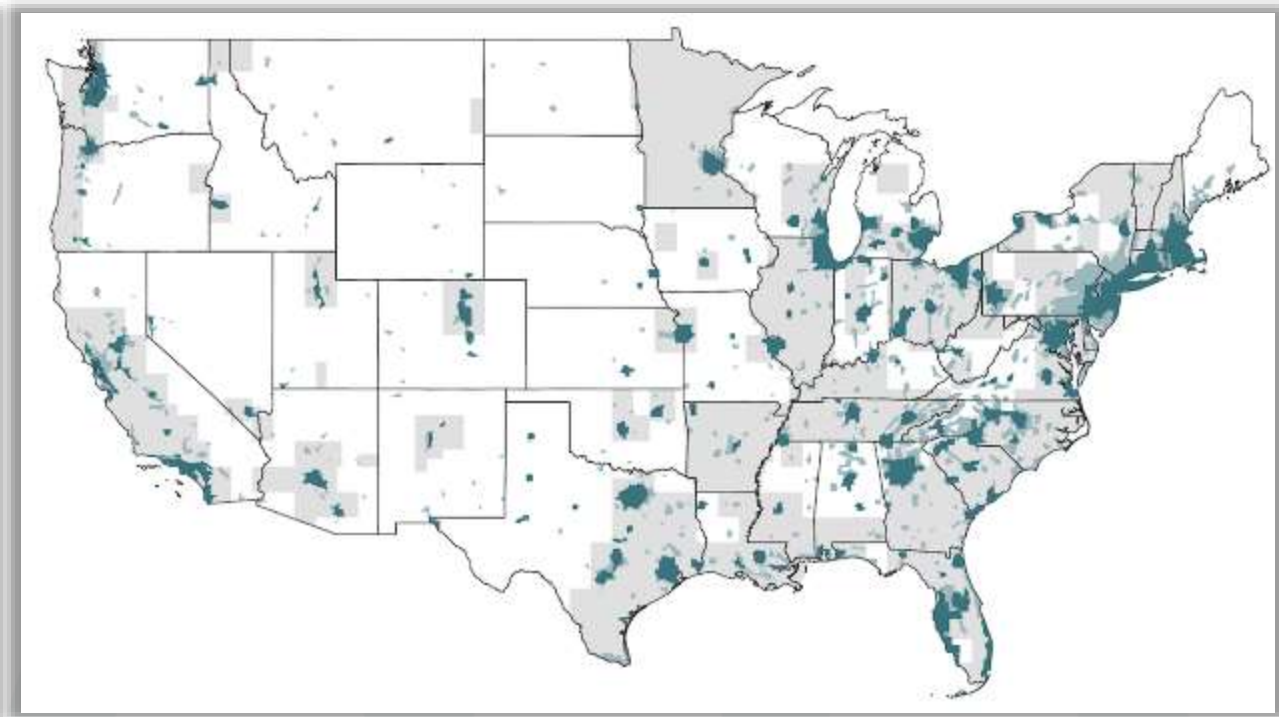
Vexcel Imaging



Vexcel Data Program



Complete US Coverage & Collecting > 4.2 million KM² Annually



Vexcel's historical image library going back > 5 years

Rich data stack of multiple aligned data sets for comparison analysis or analytics

Vexcel's 2023 scheduled manned aircraft aerial collections

On-going new and refresh collections to provide the most up-to-date imagery at scale
Collecting 4.2 million square kilometers

Feature Extractions: Infrastructure, Roadway, Building & Property Elements



Building Attributes

- 10+ building and structure attributes
- Available for current and historic imagery

Property Attributes

- 20+ attributes, including footprint area, roof condition, solar panels, and pools
- Available for current and historic imagery

Damage Assessment

- Post-disaster analysis on impacted properties
- Available for all Gray Sky collection from 2022 and forward

Feature Extractions: Roadway Elements

Pavement Markings

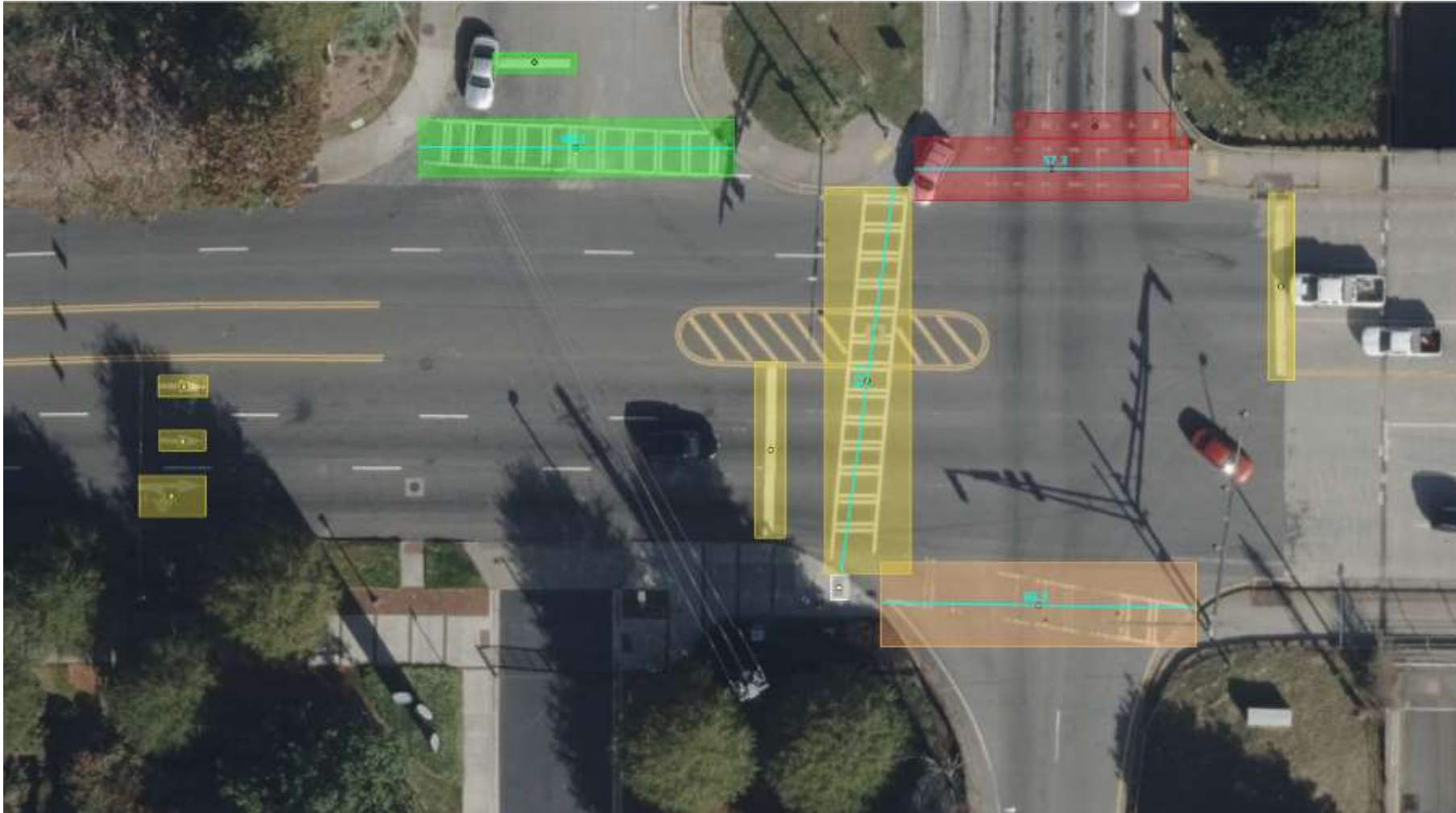
- Crosswalks
- Bicycle symbols
- Arrows
- Words
- Available for current and historical imagery

Infrastructure

- Pedestrian refuge islands
- ADA truncated domes “curb mats”
- Intersection-junctions
- Available for current and historical imagery

Condition Assessment

- Pavement marking quality score for prioritizing maintenance
- Available for current and historical imagery





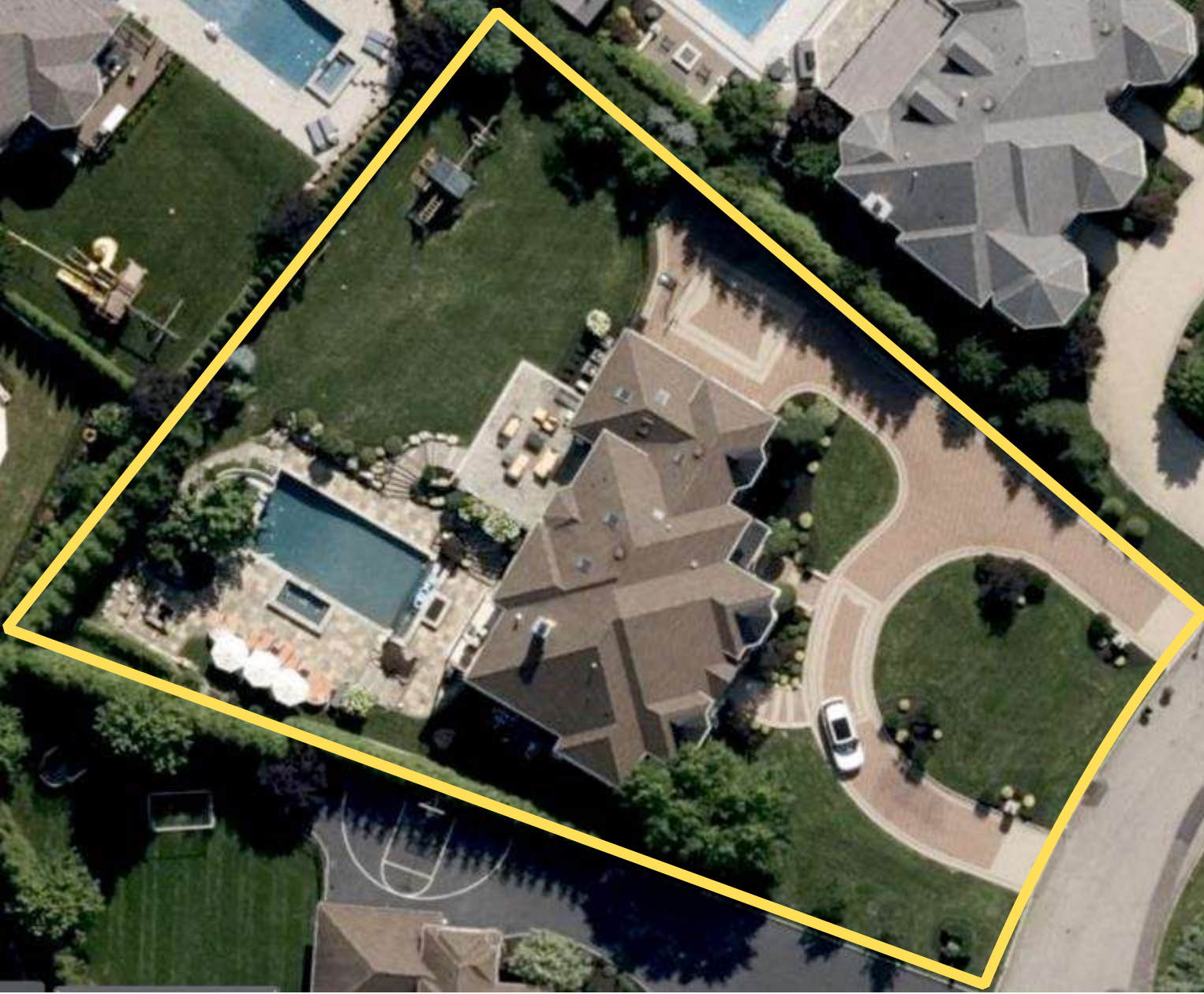
VEXCEL

New Orleans, LA, USA



Overlays 500 ft

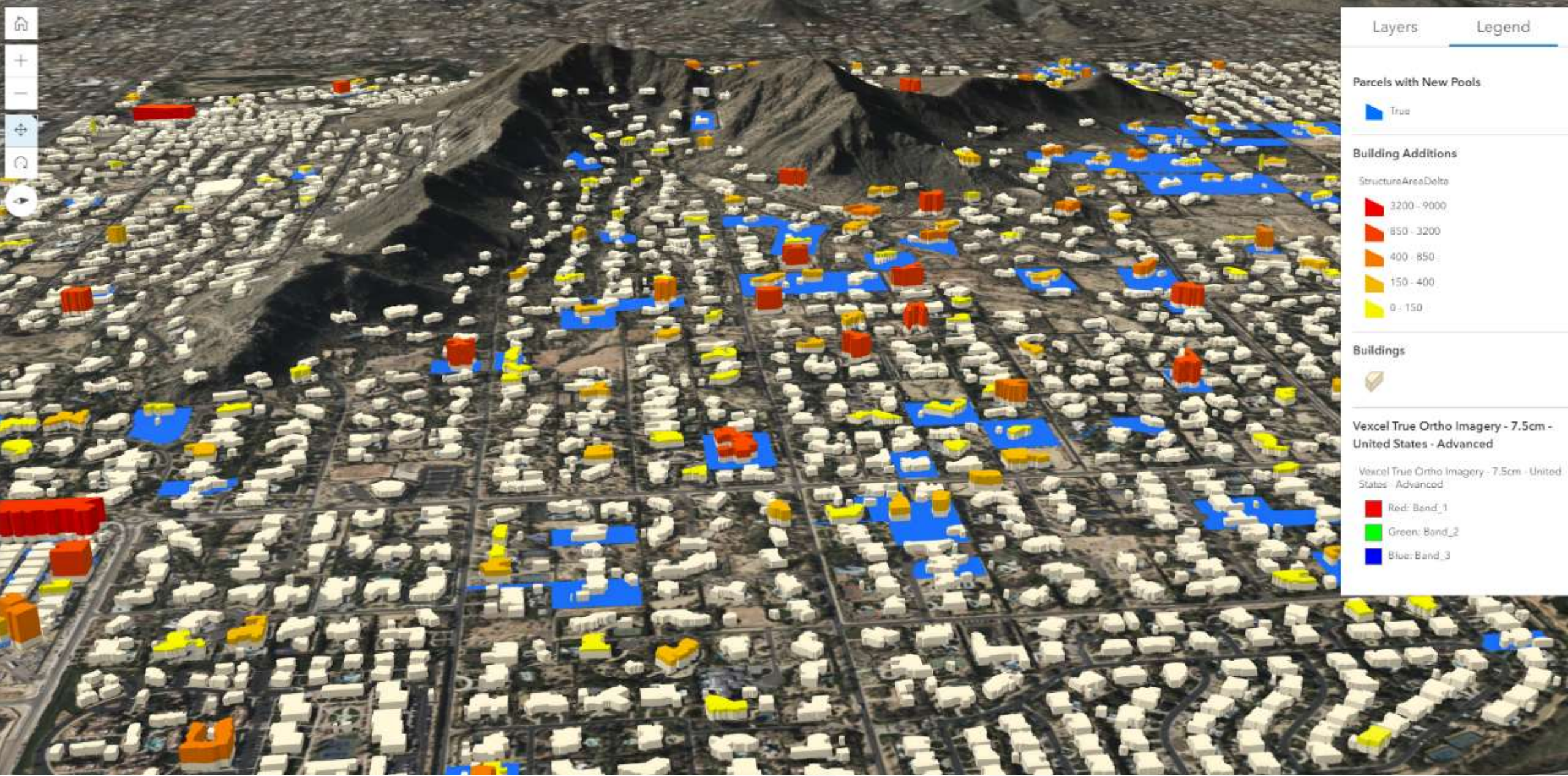




Property Attributes	Value
Pool	Yes – 1395.97 ft ²
Pool: In ground-area	Yes – 1336.98 ft ²
Pool: Above ground	No-N/A
Enclosure	No
Diving board	No
Water slide	No
Deck	No
Playground	No
Trampoline	No
Sports court	No
Hardscapes	Yes – 7,470 ft ² , 72% of property
Vehicles: automobile	1
Vehicles: boat	0



Building Attributes	Value
Footprint area	10,751.2 ft ²
Ground elevation	31.01 ft
Roof elevation	54.1 ft
Roof height	17.32 ft
Roof Centroid	-97.503442 25.922652
Tree cover over roof	0%
Roof solar	Yes
Chimney(s)	0
AC unit(s)	0
Roof vent(s)	6
Satellite dish(es)	3
Skylight(s)	6
Roof shape	Flat
Roof material	Membrane
Missing roof material	0%
Roof condition	3/5
Roof discoloration	53.08%
Vent staining	No – 0%
Algae staining	No – 0%
Water pooling	Yes – 53.08%
Roof tarp	0%
Debris	0%



Layers Legend

Parcels with New Pools

- True

Building Additions

StructureAreaDelta

- 3200 - 9000
- 850 - 3200
- 400 - 850
- 150 - 400
- 0 - 150

Buildings

Vexcel True Ortho Imagery - 7.5cm - United States - Advanced

Vexcel True Ortho Imagery - 7.5cm - United States - Advanced

- Red: Band_1
- Green: Band_2
- Blue: Band_3



Property Change Detection



Layers Legend X

Buildings by Fire Risk

■ > 39
■ 26
■ < 13

Buildings

■ Voxel True Ortho Imagery - 7.5cm - United States - Advanced

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Fire Risk Analysis & Defensible Space

