

Visualizing Your Project



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ALDOT Visualization Engineer

VISUALIZATION

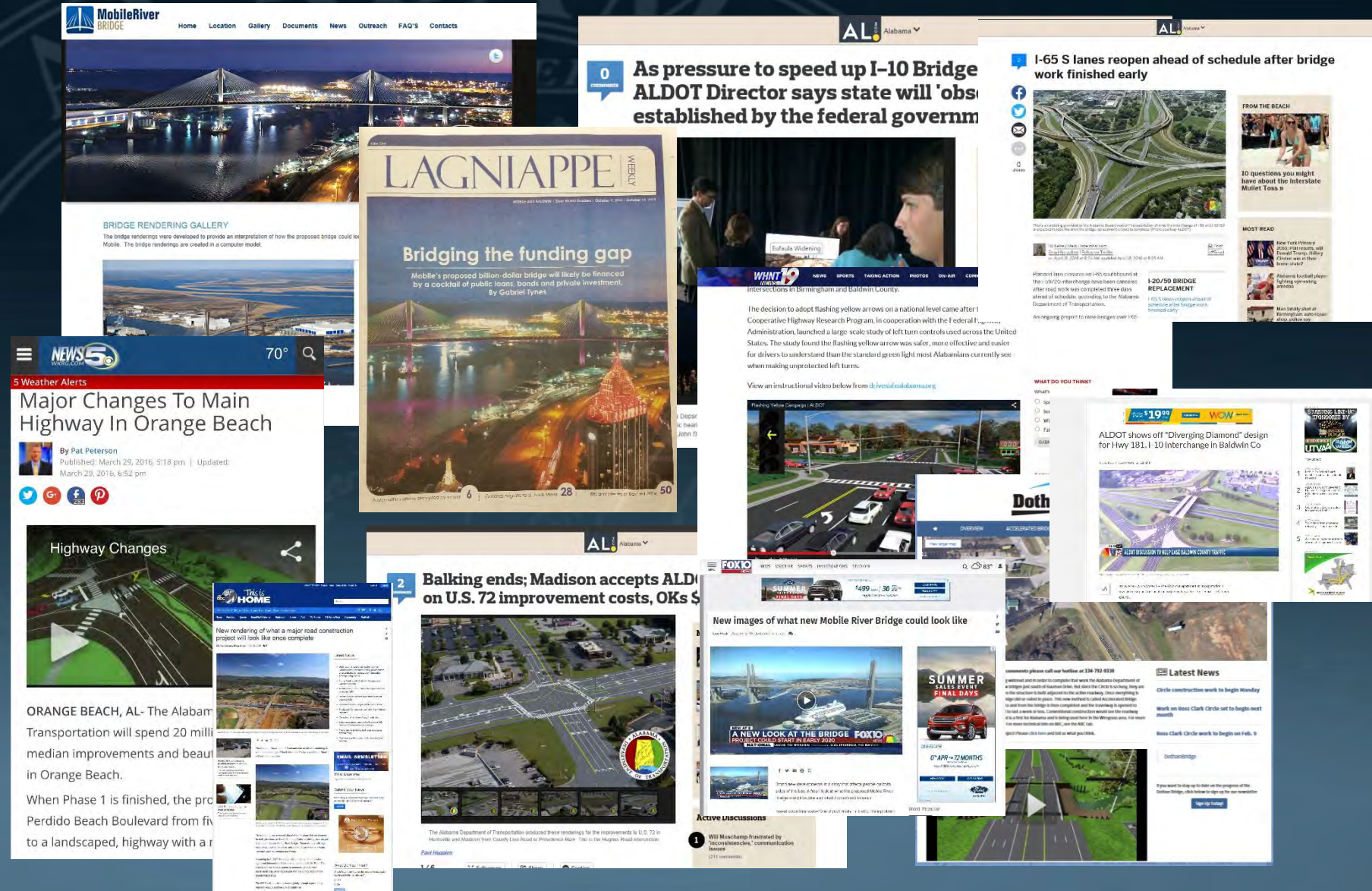
Section Responsibilities

- 3D Modeling
- Renderings
- Animations
- Photo-Matching
- Aerial Photography
- Clash Detection
- LiveCubes
- Reality Meshes
- Public Hearings
- Public Relations
- Concepts
- Design Considerations
- Project Development
- Court Cases
- ROW Acquisitions
- Constructability

PUBLIC RELATIONS

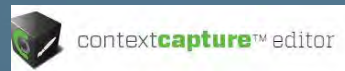
Social Media

- Facebook
- Twitter
- Project Specific Webpages
- ALDOT Internet
- Local News TV
- News Websites
- News Papers
- YouTube



SOFTWARE

- CADD
 - Microstation
 - InRoads
 - OpenRoads*
 - SketchUp
- Viz/Others
 - Context Capture
 - LumenRT
 - PTV Vissim
 - Earth Pro
- Editing
 - Adobe
 - Photoshop
 - Premiere
 - After Effects



the mind of movement



VISUALIZATION

Identifying the need “Up Top”

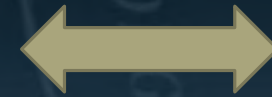
Political? Environmental? Law Suits? Complex?

TIME = LEVEL OF DETAIL

Existing Model



Design



Visualization

Survey

- Lidar
- Topo

Drone Group

- Images for Photomatches
- Images for Reality Mesh

Design Group/Consultants

- DTM's Requirements
- Template Drops
- Early Files/Data
- Traffic Data (Traffic Group)
- Structures (Bridge Group)

Administration Goals

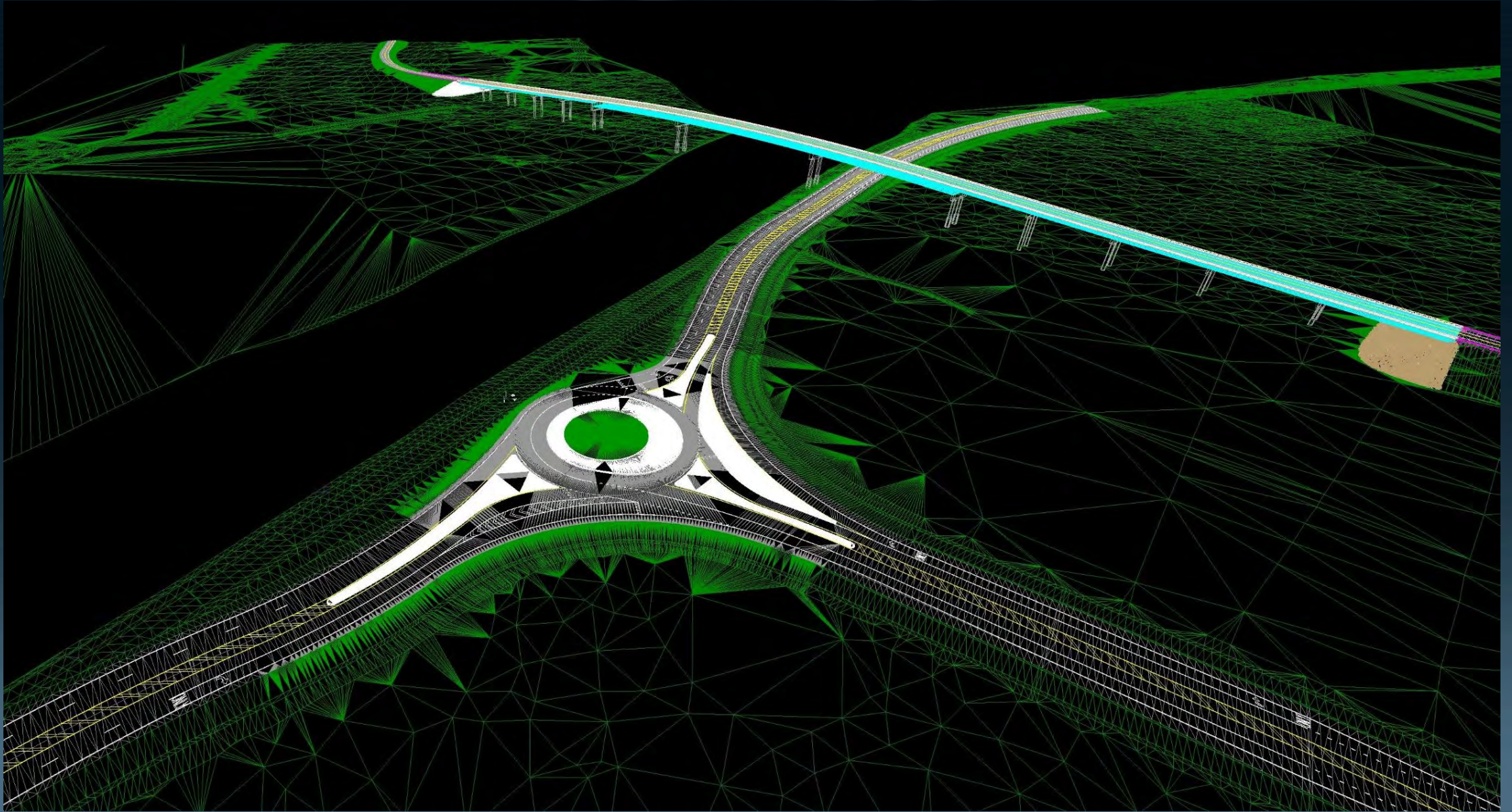
- Audience
- Show or Not to Show
- Traffic Simulation
- Potential Problem Areas
- Wants/Needs

Information

Collaboration

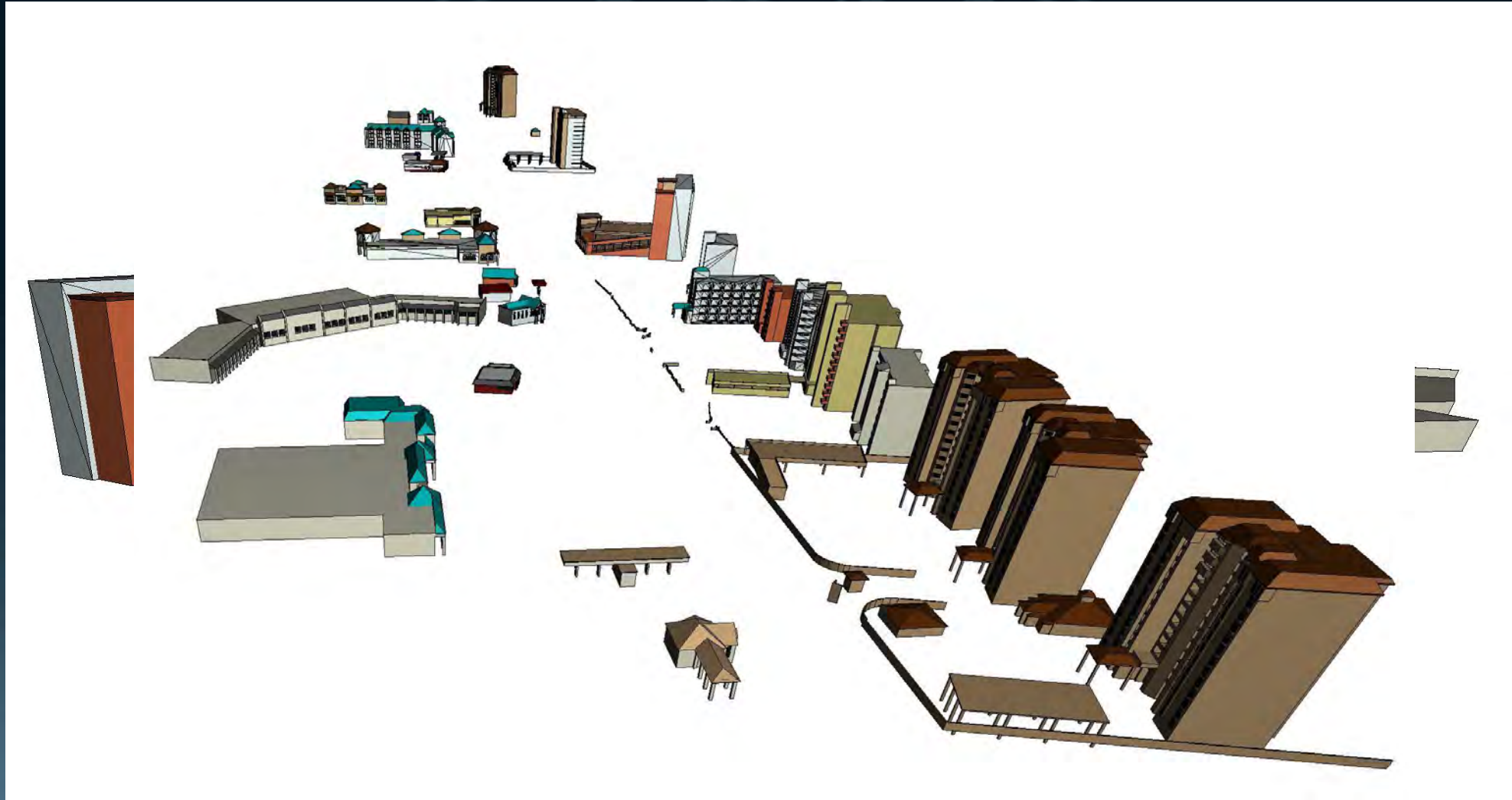
Communication

EXISTING MODEL



Standard Survey DTM/LiDAR

EXISTING MODEL



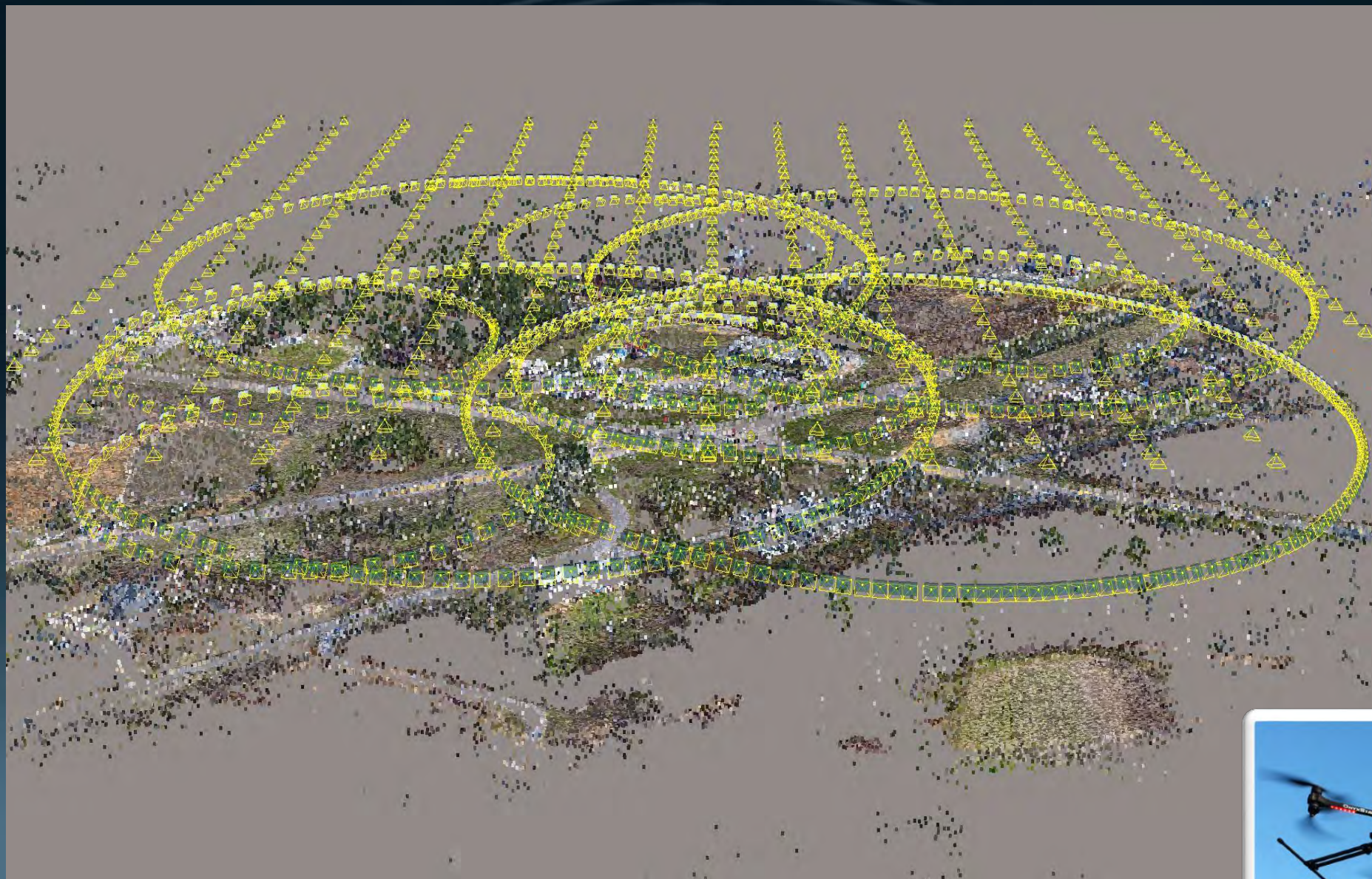
Standard Survey DTM/LiDAR

EXISTING MODEL

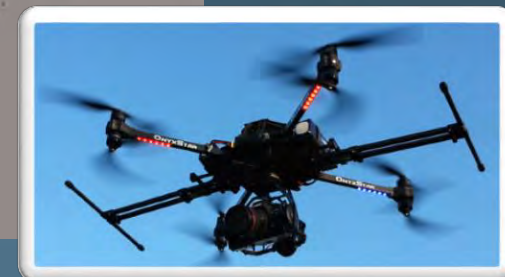


Standard Survey DTM/LiDAR

EXISTING MODEL



Reality Mesh

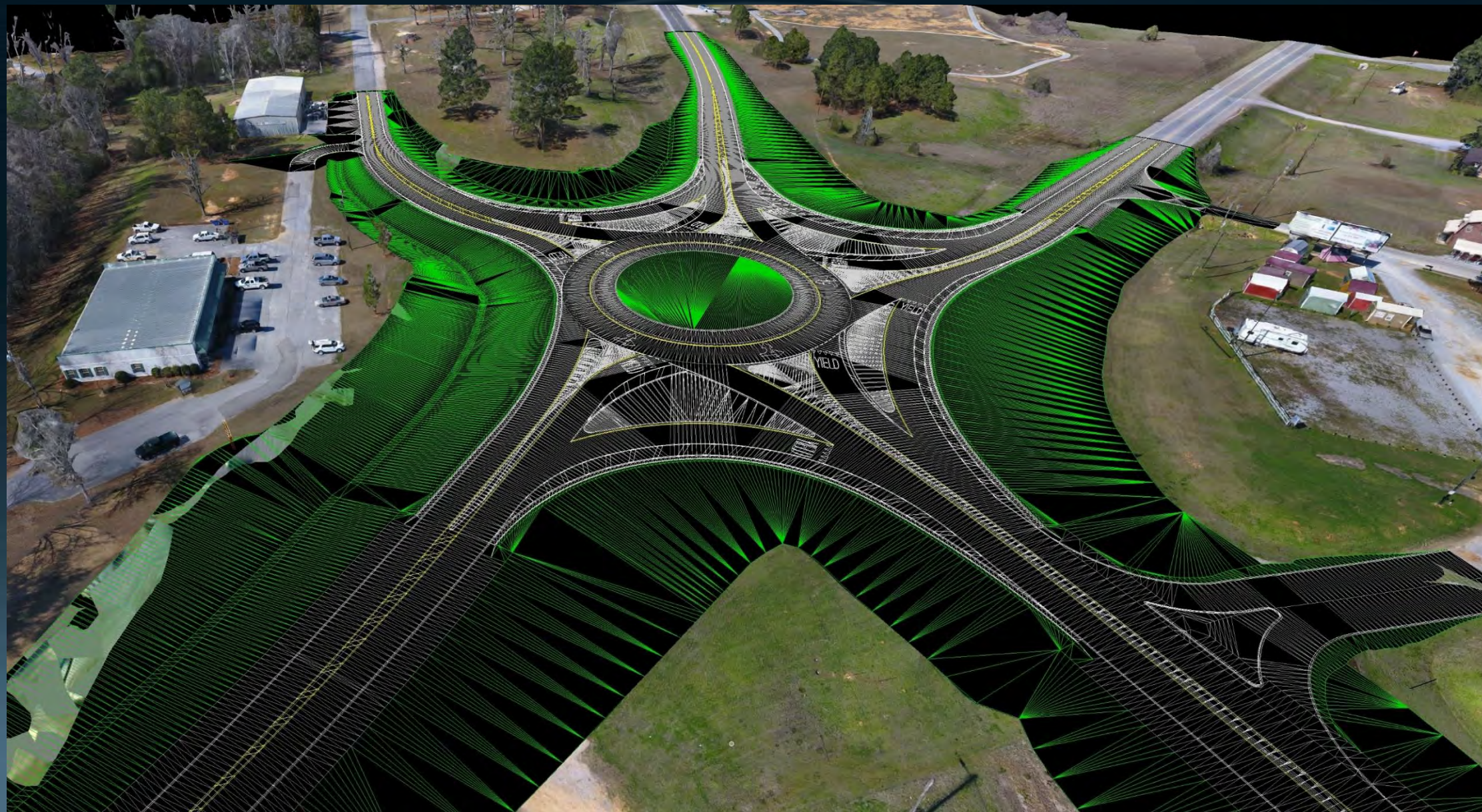


EXISTING MODEL



Reality Mesh

EXISTING MODEL



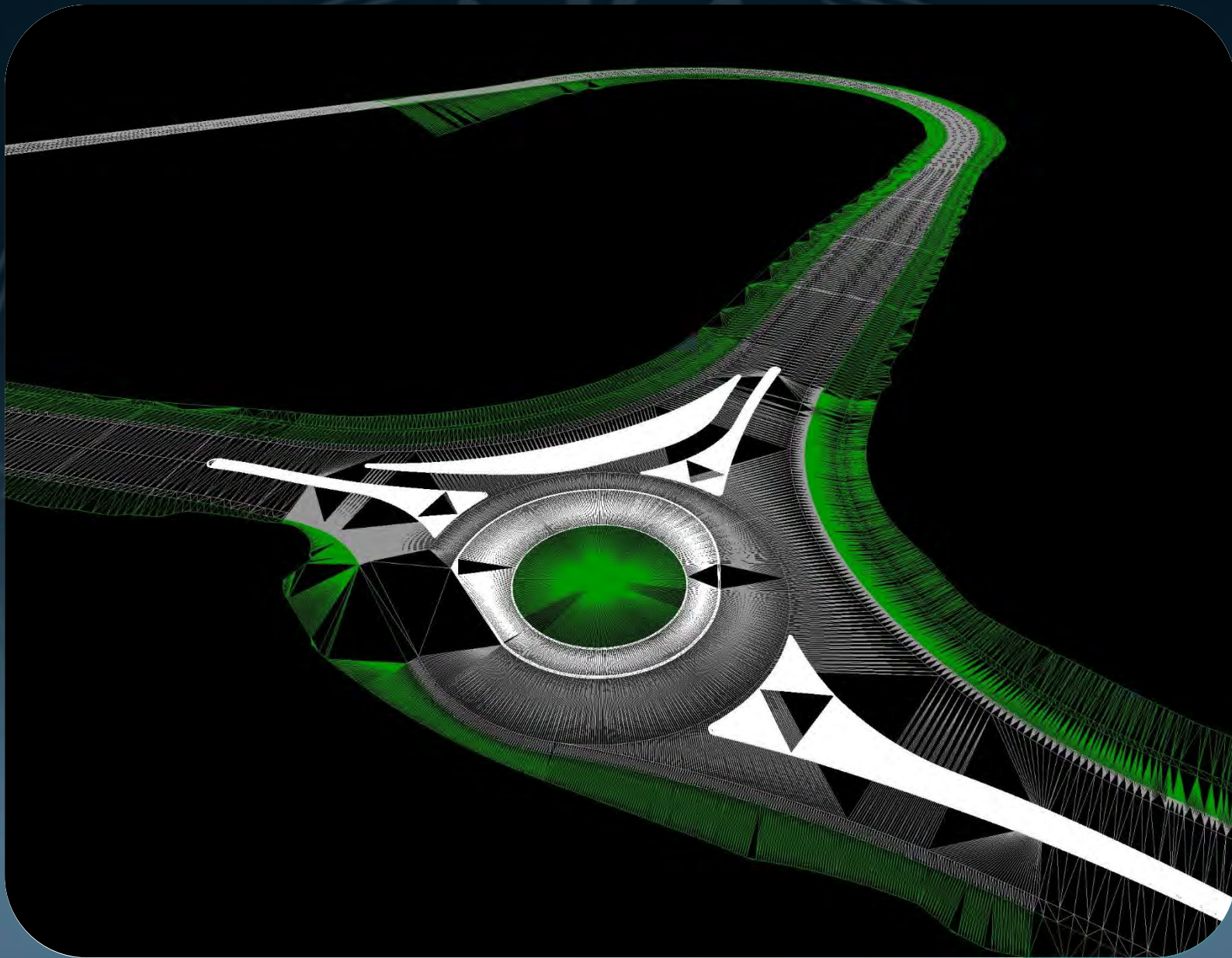
Reality Mesh

EXISTING MODEL



Reality Mesh

DESIGN



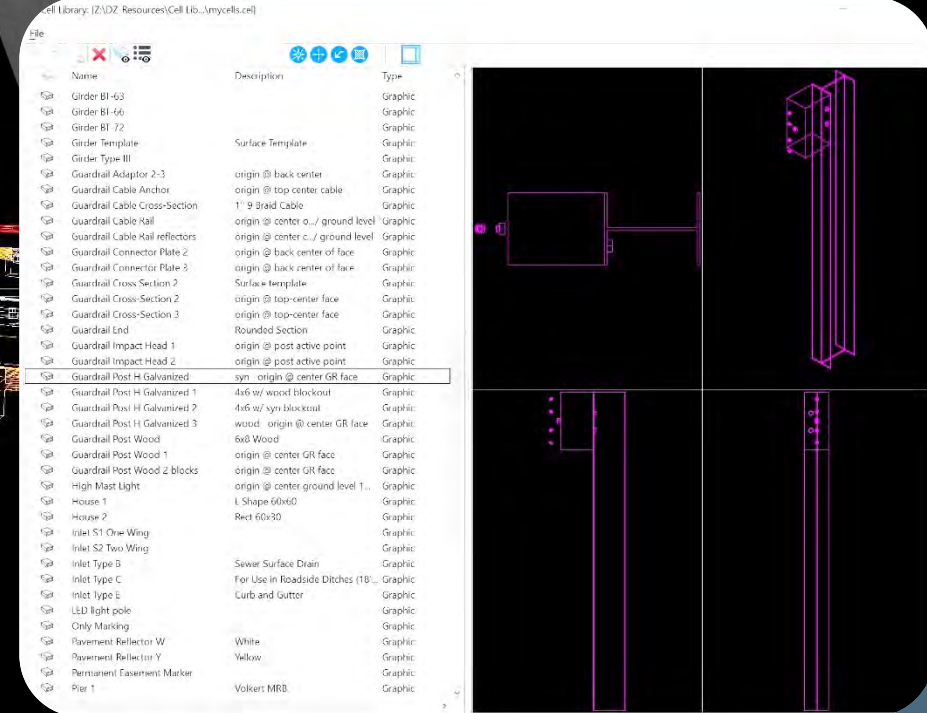
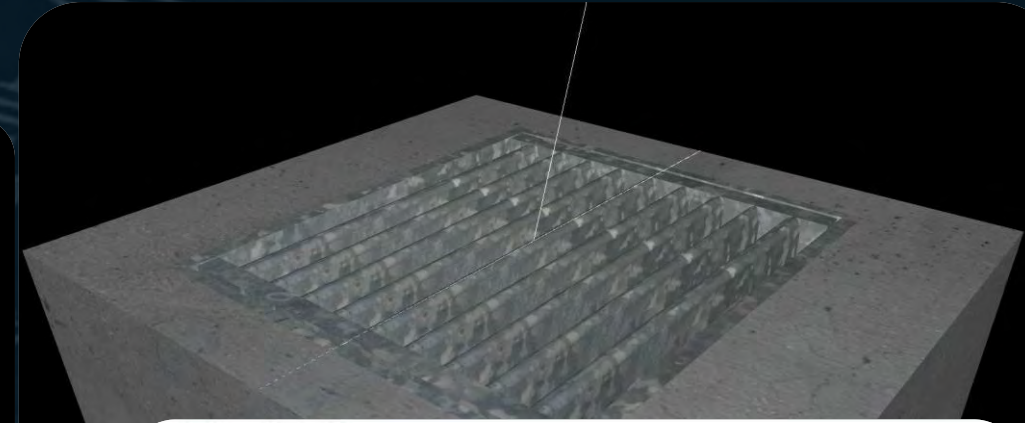
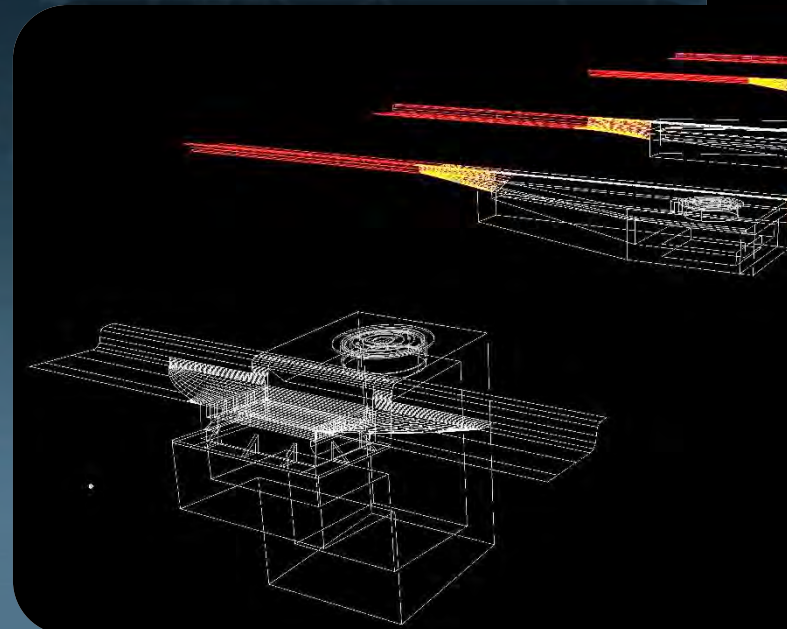
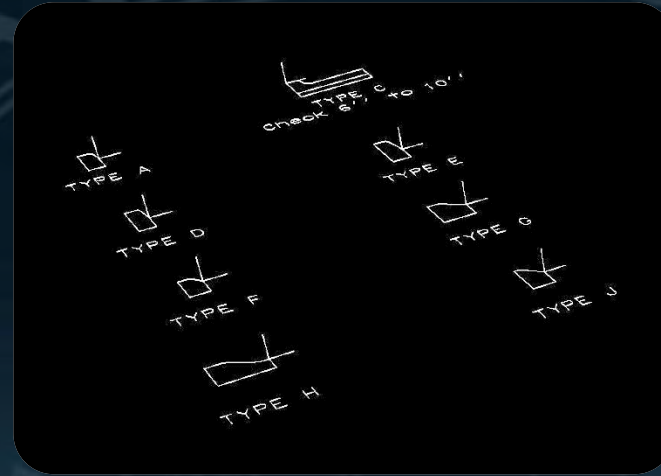
DESIGN



DESIGN

KEYS TO A FAST DELIVERY:

- Standard Templates
 - Girders
 - Curbs
 - Bridge
 - Barrier Rails
- 3D Cells
 - Signs
 - Power Poles
 - Inlets
 - Guardrails
- 3D Workflows
- Material Library's



PHOTOMATCH



Photomatches (No Animations, Time Sensitive)

PHOTOMATCH



PHOTOMATCH



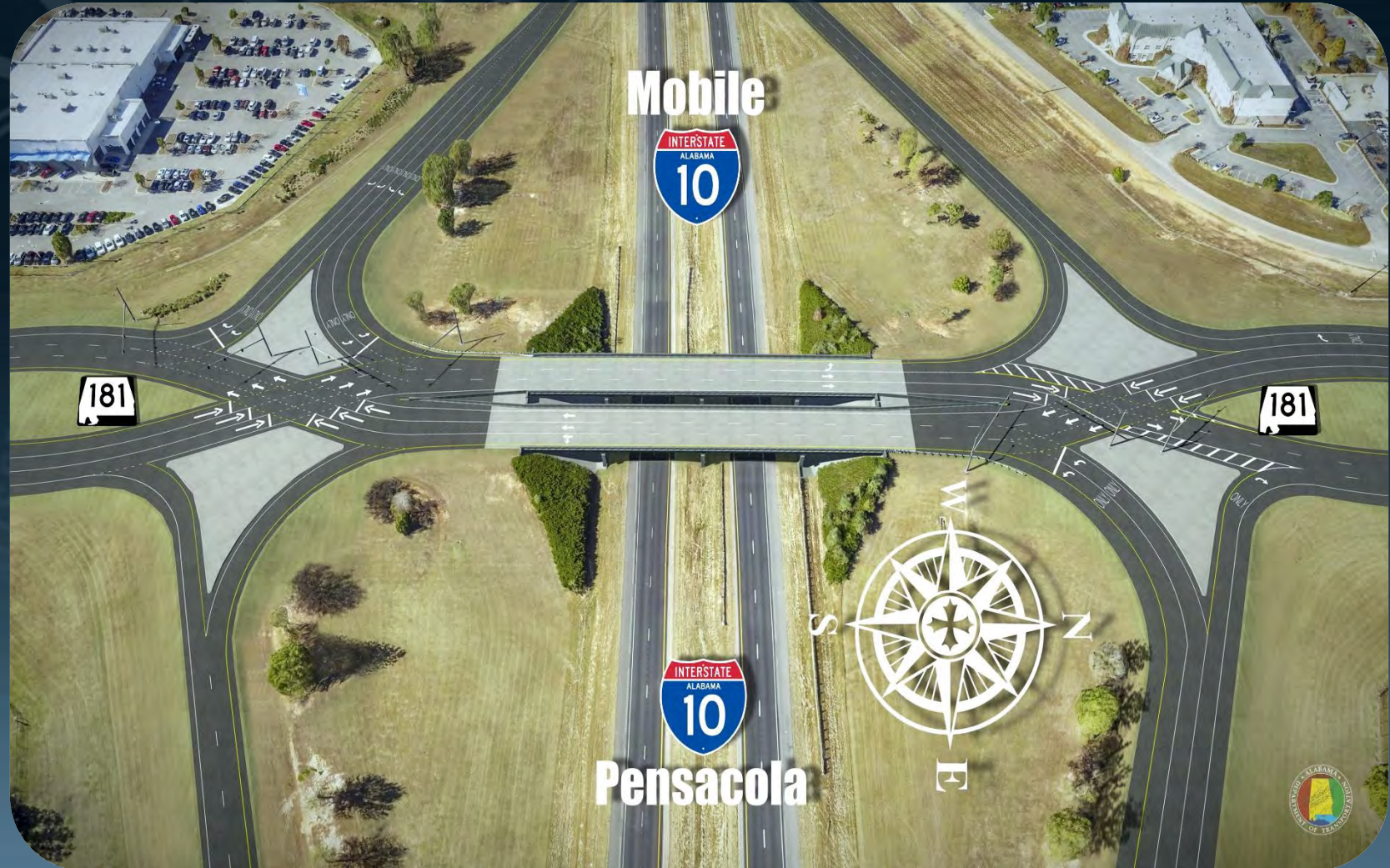
DDI — BALDWIN COUNTY

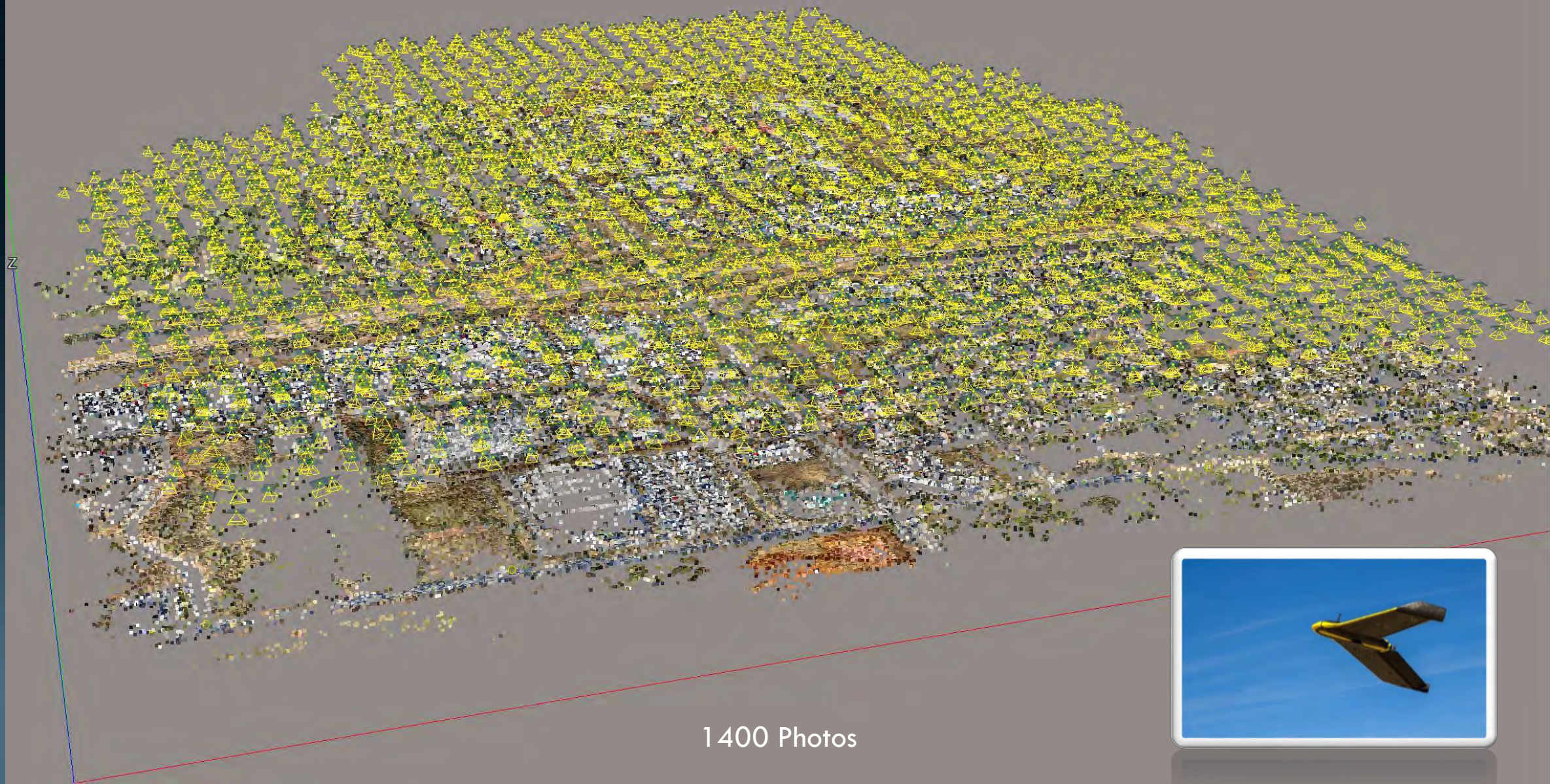
Visualization Goals

- Photomatches
- Renderings
- Reality Mesh
- Animations
- Projected Traffic Simulation

Target Audience

- Public “Operational”





Public Involvement Meetings



I-59/I-20 CORRIDOR PROJECT

Visualization Goals

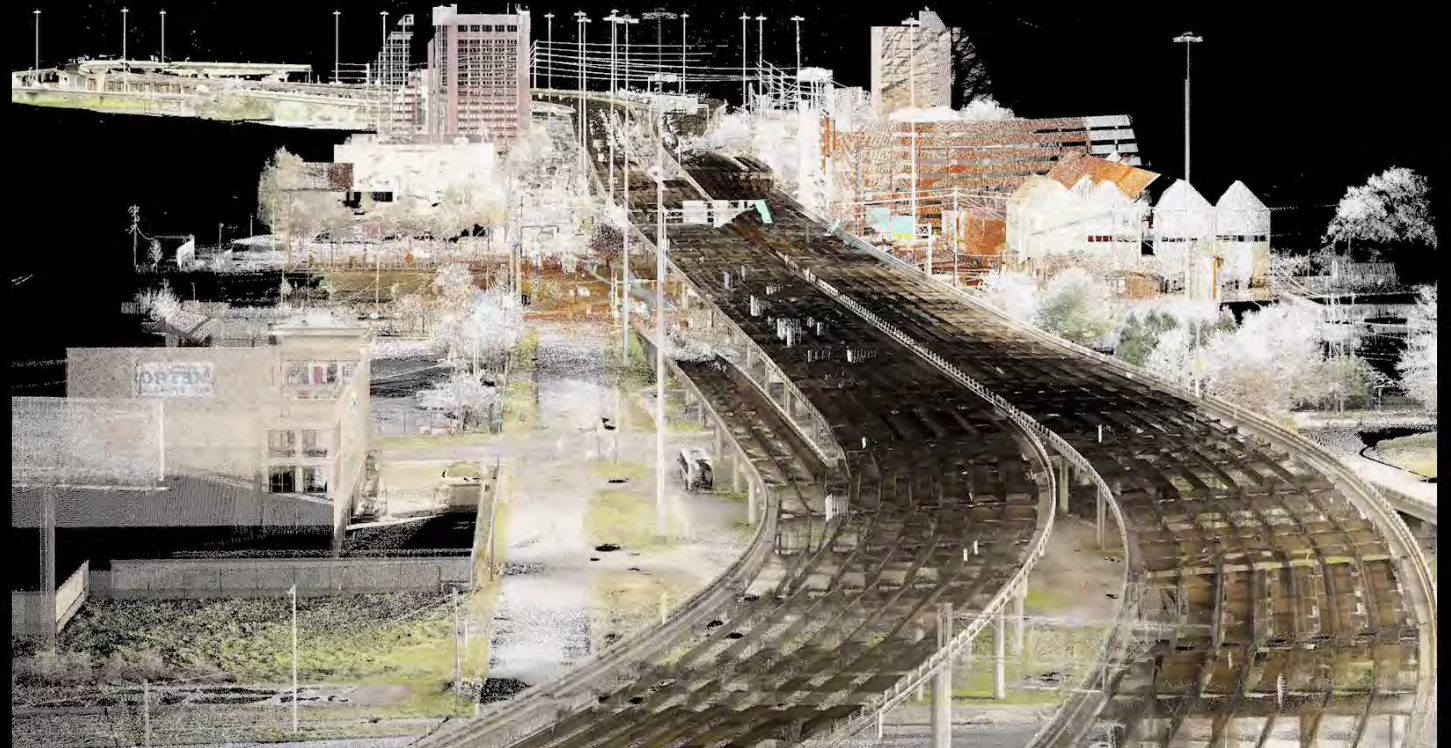
- Photomatches
- Renderings
- LiveCube

3D Engineering/BIM Goals

- Project Development
- Clash Detection
- 3D Model to Contractors
Pre-Bid

Target Audience

- Public
- Mayor and City Council
- Norfolk Railroad
- Businesses
- Courts



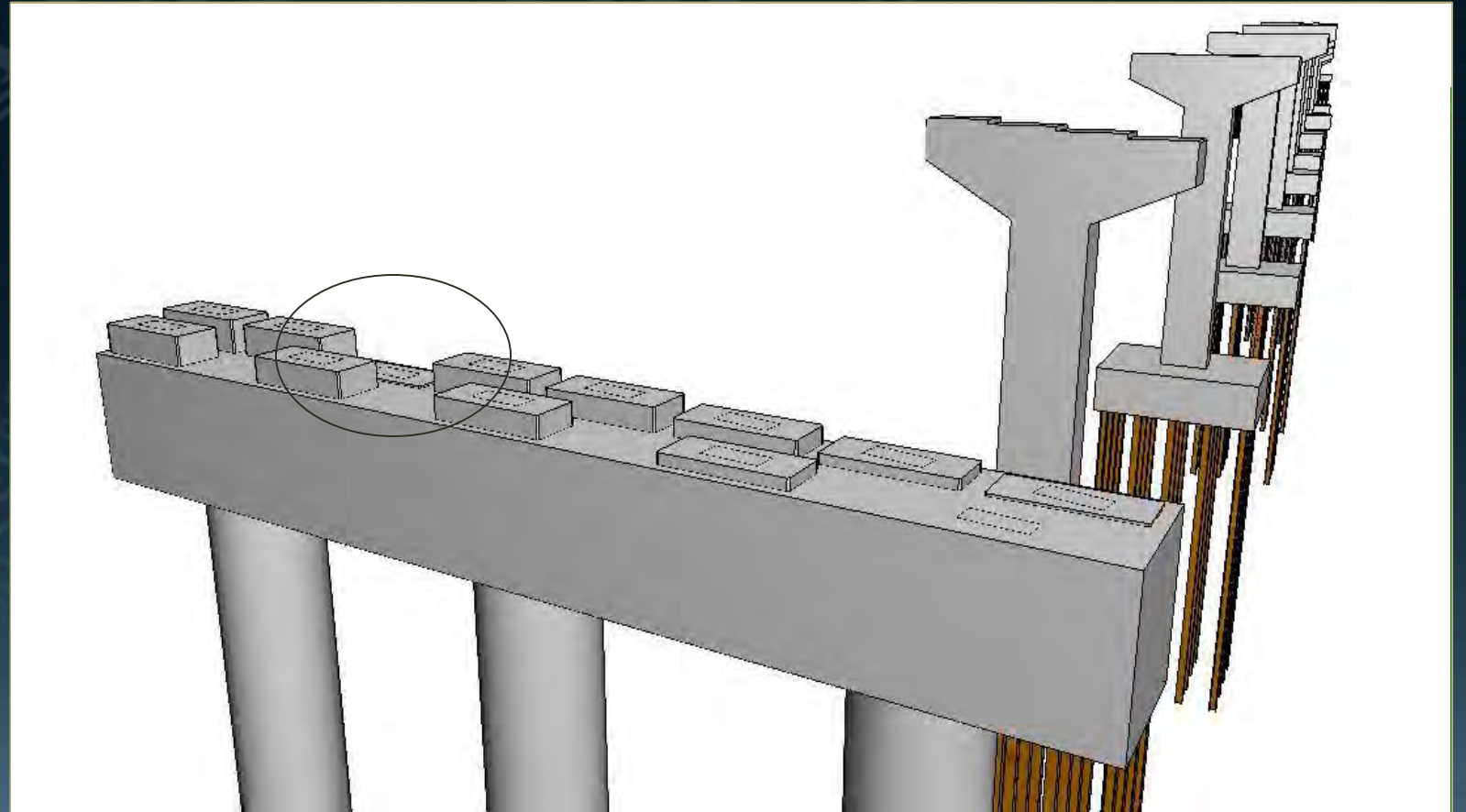
Design Checks

Footing Exposures Overlooked

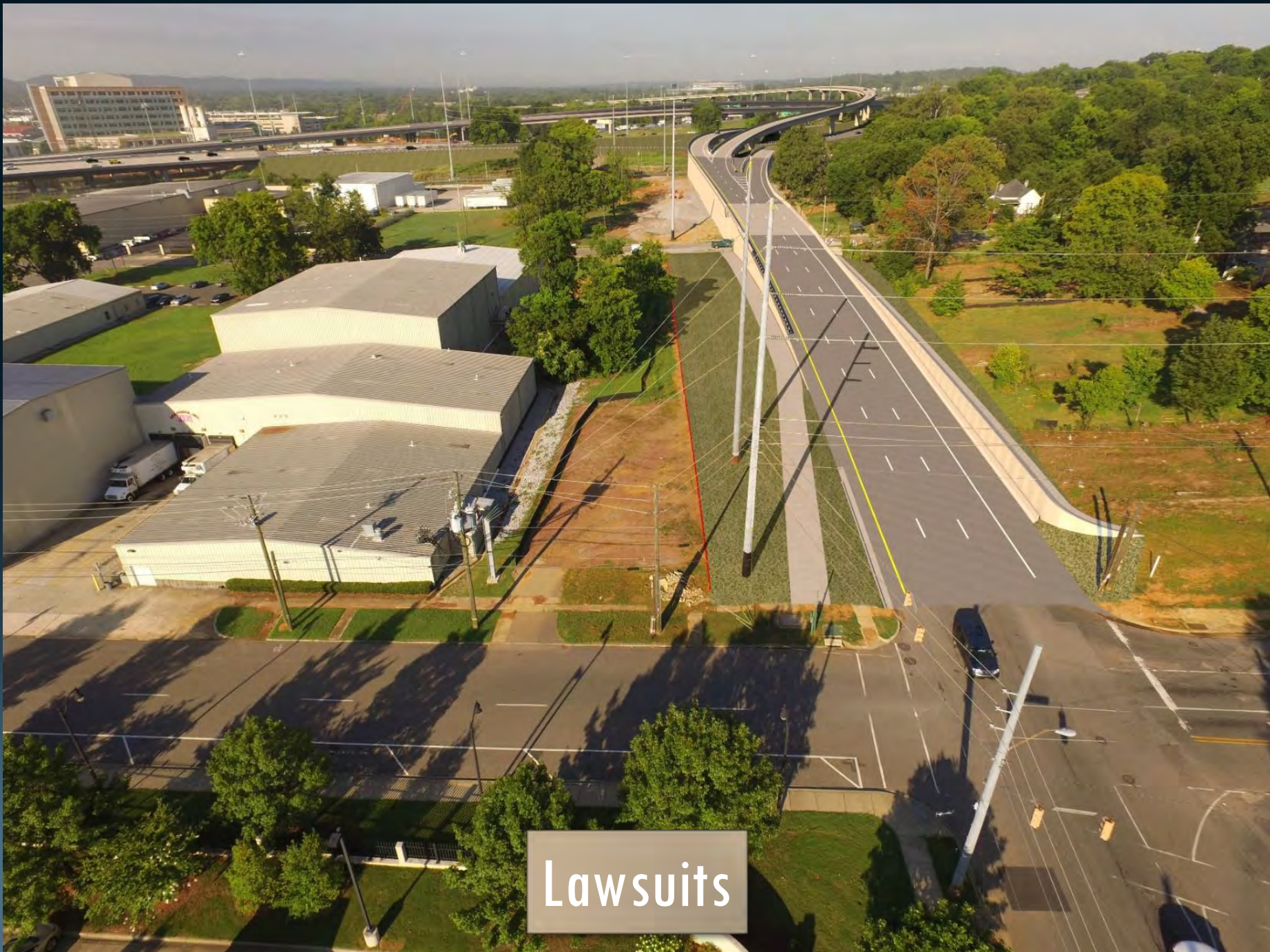
Horizontal and Vertical Clearances

- RR Clearances
- Bridge Clearances

Bridge Ped Elevations

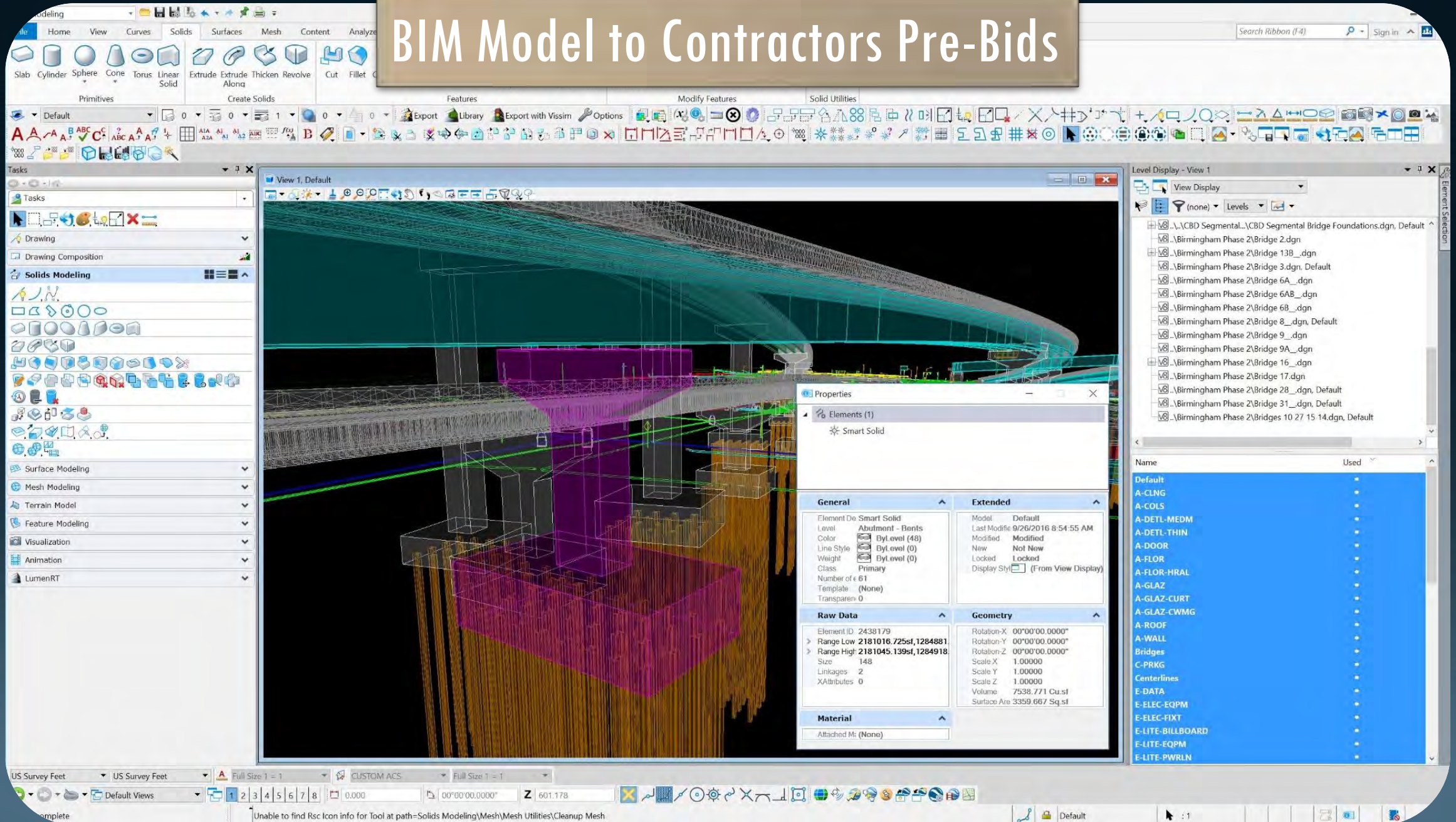






Lawsuits

BIM Model to Contractors Pre-Bids



MOBILE RIVER BRIDGE

Visualization Goals

- Photomatches
- Renderings
- Reality Mesh
- Animations

Target Audience

- Public “Buy-In”
- Mayor and City Council
- Historical Commission
- Environmental Groups
- Businesses



2014 MODEL



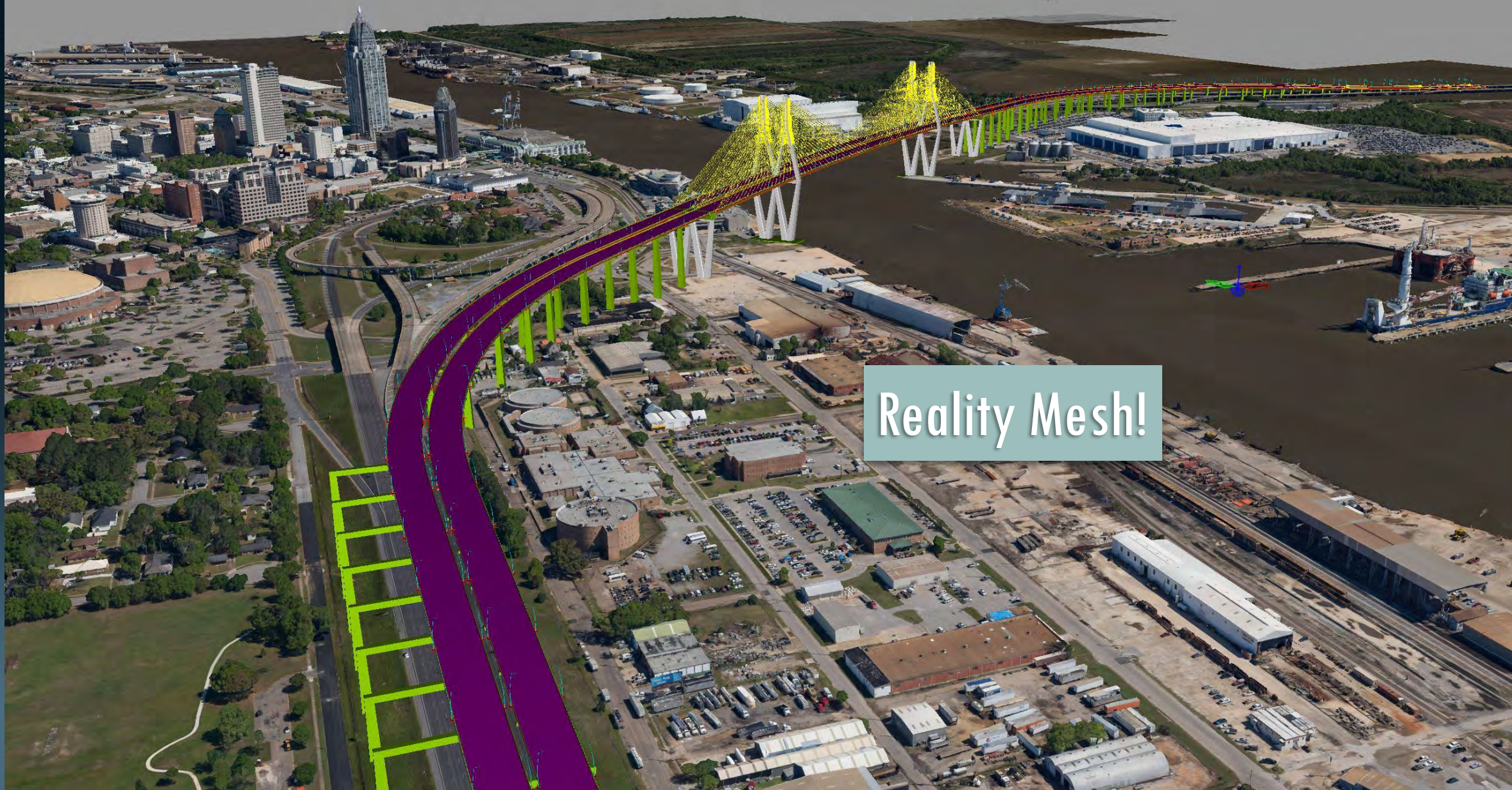


MOBILE RIVER BRIDGE



2017 MODEL

Reality Mesh!



FUGRO GEOSPATIAL

- Structured Aerial Dataset Grid
- Taken from Plane
- Multi-Rig Camera System
 - All Nikon Cameras
 - 4 Oblique Cameras
 - 1 Nadir Camera



3075 Photos





Mobile River BRIDGE





Public Involvement Meetings



Immersive 3D Environment (LiveCube)





Thank You