

Oklahoma DOT Perspective

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ODOT Perspective

- Current state of ODOT's UAS Program
- Video Productions
- Tower Equipment
- OHP Quick Clearance
- Survey
- Future Possibilities
- State Wide Contract



Current state of ODOT's UAS Program

– Play Video

- Video Production only ODOT owned Drones
- ODOT will not be purchasing any more drones
- Consultants
- ODOT doesn't want cost of keeping up with technology – drones – LIDAR – etc.
- Everyone is welcome to use drones as they see fit through contracts.
- Decentralized

Video Production – Play Video

- Public Relation Promotions
- Got first drone in July of 2018
- Currently have 2 drones
- No 107 certified pilots
- 2 pilots on staff
- No 107 certified pilots
- ODOT operates UAS under a Section 333 exemption via a Public Certificate Waiver or Authorization (COA)

Video Production – Project Historical Documentation



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Video Production – Project Historical Documentation



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Video Production – Emergency Response documentation



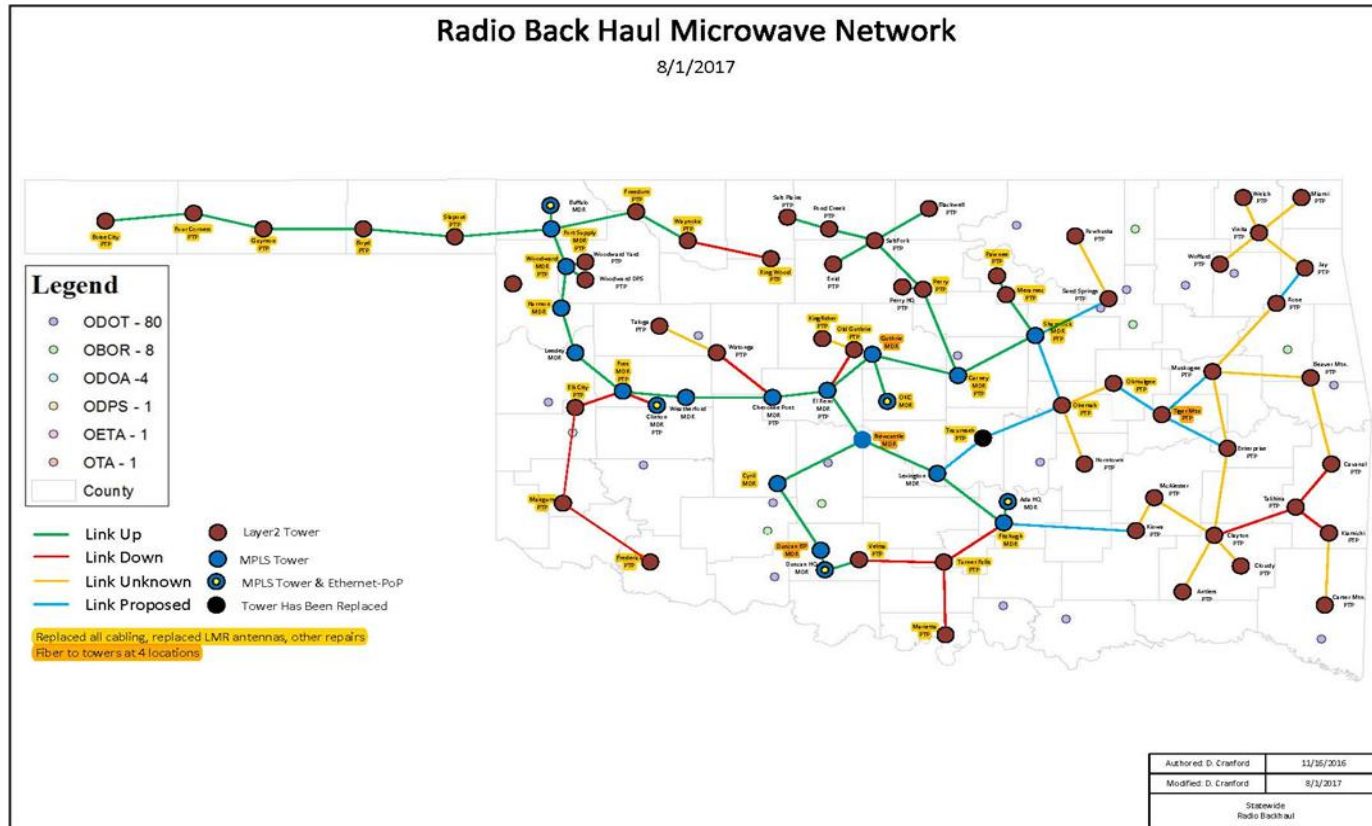
Video Production – Emergency Response documentation



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Tower Equipment Inspections

- ODOT owns 100 communication towers around the state
- ODOT Co-Locates on 25 other towers



Tower Equipment Inspections

- Tower climbers cost \$5,000 for 2 climbers for 1 day
- Current contract for UAS:
 - \$850/tower within 50 miles from OKC
 - \$1100/tower 50 to 150 miles from OKC
 - \$1350/tower over 150 miles

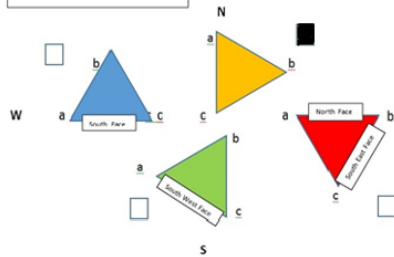


Tower Equipment Inspections

Tower Report

Tower/Pole Location: City: Durant DPS Division: 2 Time In: _____
 Road: Carl Albert Dr Time Out: _____
 Lat: 34.021275 Long: -96.386405
 Date: 05-30-2019
 Weather Cond: _____ Temp: _____
 Tower Mfg: _____
 Model: _____ Ht: 330' (*285ft)

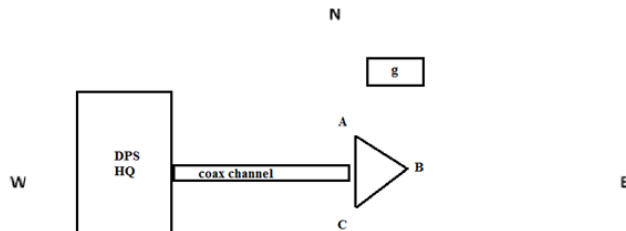
Check the box next to the tower orientation that best fits the location



LEGEND

A = Anchors (Guy cable to ground)
 C = Communication Hut/Cabinet (opening of the C should point in the direction the door faces)
 F = Fuel supply E = Electrical Supply
 g = Generator M = Electrical Meter
 G = Gate P = Propane
 ----- = Fence

Draw a triangle in the space below as it is positioned on the property in relation to N, S, W, E, and place the coded legend items in the appropriate location around the triangle.



Number of Dish on Tower: 0
 Number of Antenna on Tower: 12
 Number of Lights on Tower: 4
 Number of Cameras on Pole: 0
 Number of Lightning Rods: 1

Examples:

Dish

#1-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft

Antenna

#1-Mounting Hgt: 100; Tip Height: 110 ft; Mounting Location: Face SE/Leg A

Light

#1-Mounting Hgt: 100; Mounting Location: Face SE/Leg A,B,C; Working: Y/N; Flash: Y/N

Anchor Point

#1-Mounting Hgt: 120; Mounting Location: Face SE/Leg C

Camera

#1-Mounting Hgt: 30; Pan/Tilt/Zoom: Y/N; Web: Y/N

Dish

#1-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft
 #2-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft
 #3-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft
 #4-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft
 #5-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft
 #6-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft
 #7-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft
 #8-Mounting Hgt: 100; Mounting Location: Face SE/Leg B; Line of Sight Ht: 108; Direction: NW; Size: 8 ft

Antenna

#1-Mounting Hgt: 20; Tip Height: 33 ft; Mounting Location: Face SE/Leg A Type UHF
 #2-Mounting Hgt: 23; Tip Height: 33 ft; Mounting Location: Face SE/Leg C Type 2 LOOP
 #3-Mounting Hgt: 136; Tip Height: 136 ft; Mounting Location: Face SE/Leg A Type UHF
 #4-Mounting Hgt: 205; Tip Height: 205 ft; Mounting Location: Face SE/Leg A Type UHF
 #5-Mounting Hgt: 206; Tip Height: 206 ft; Mounting Location: Face SE/Leg B Type UHF
 #6-Mounting Hgt: 219; Tip Height: 223 ft; Mounting Location: Face SE/Leg C Type 1 LOOP
 #7-Mounting Hgt: 224; Tip Height: 244 ft; Mounting Location: Face SE/Leg A Type 4 LOOP
 #8-Mounting Hgt: 224; Tip Height: 244 ft; Mounting Location: Face SE/Leg C Type 4 LOOP

Light

#1-Mounting Hgt: 142; Mounting Loc: Face SE/Leg A; Working: Y/N; Flash: Y/N
 #2-Mounting Hgt: 142; Mounting Loc: Face SE/Leg B; Working: Y/N; Flash: Y/N
 #3-Mounting Hgt: 142; Mounting Loc: Face SE/Leg C; Working: Y/N; Flash: Y/N
 #4-Mounting Hgt: 285; Mounting Loc: Face SE/Leg C; Working: Y/N; Flash: Y/N
 #5-Mounting Hgt: 285; Mounting Loc: Face SE/Leg C; Working: Y/N; Flash: Y/N
 #6-Mounting Hgt: 285; Mounting Loc: Face SE/Leg C; Working: Y/N; Flash: Y/N

Ice Bridge

#1 Bridge Hgt: 142; Face SE/Leg A
 #2 Bridge Hgt: 142; Face SE/Leg B
 #3 Bridge Hgt: 142; Face SE/Leg C
 #4 Bridge Hgt: 285; Face SE/Leg C

Camera

#1-Mounting Hgt: 30; Pan/Tilt/Zoom: Y/N; Web: Y/N
 #2-Mounting Hgt: 30; Pan/Tilt/Zoom: Y/N; Web: Y/N
 #3-Mounting Hgt: 30; Pan/Tilt/Zoom: Y/N; Web: Y/N
 #4-Mounting Hgt: 30; Pan/Tilt/Zoom: Y/N; Web: Y/N

Anchor Point

#1 Anchor Hgt: 120; Loc: Face SE/Leg C; Dst: 120
 #2 Anchor Hgt: 120; Loc: Face SE/Leg C; Dst: 120
 #3 Anchor Hgt: 120; Loc: Face SE/Leg C; Dst: 120
 #4 Anchor Hgt: 120; Loc: Face SE/Leg C; Dst: 120



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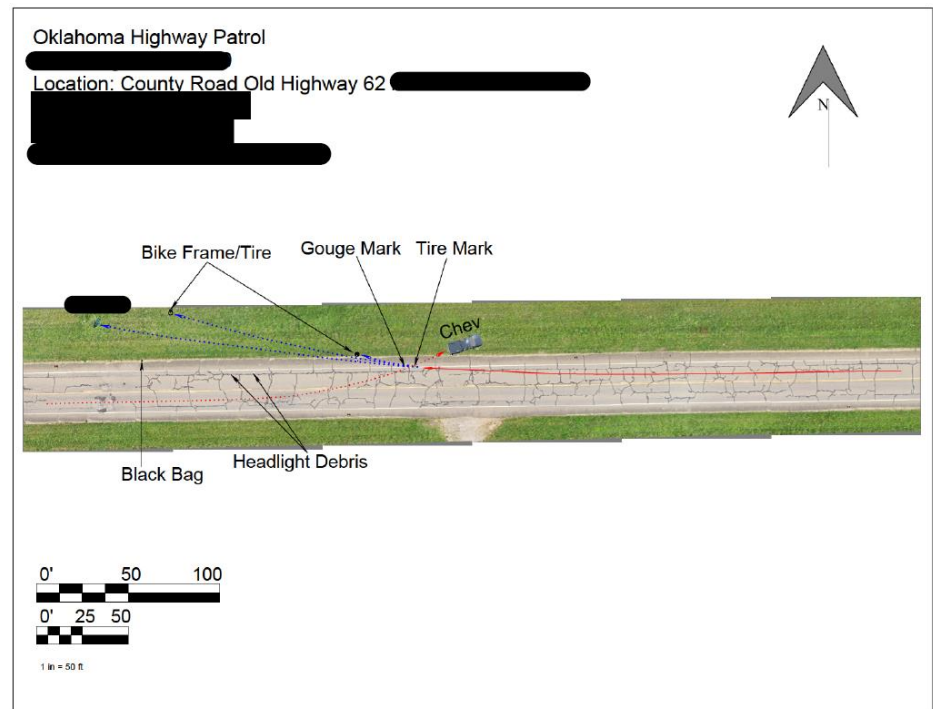
OHP - TIM Quick Clearance

- Traffic Incident Management
- A coordinated effort by emergency response to clear each incident as quickly as possible
- Decrease the delay in traffic disruption will decrease secondary incidents.
- Every Minute Counts



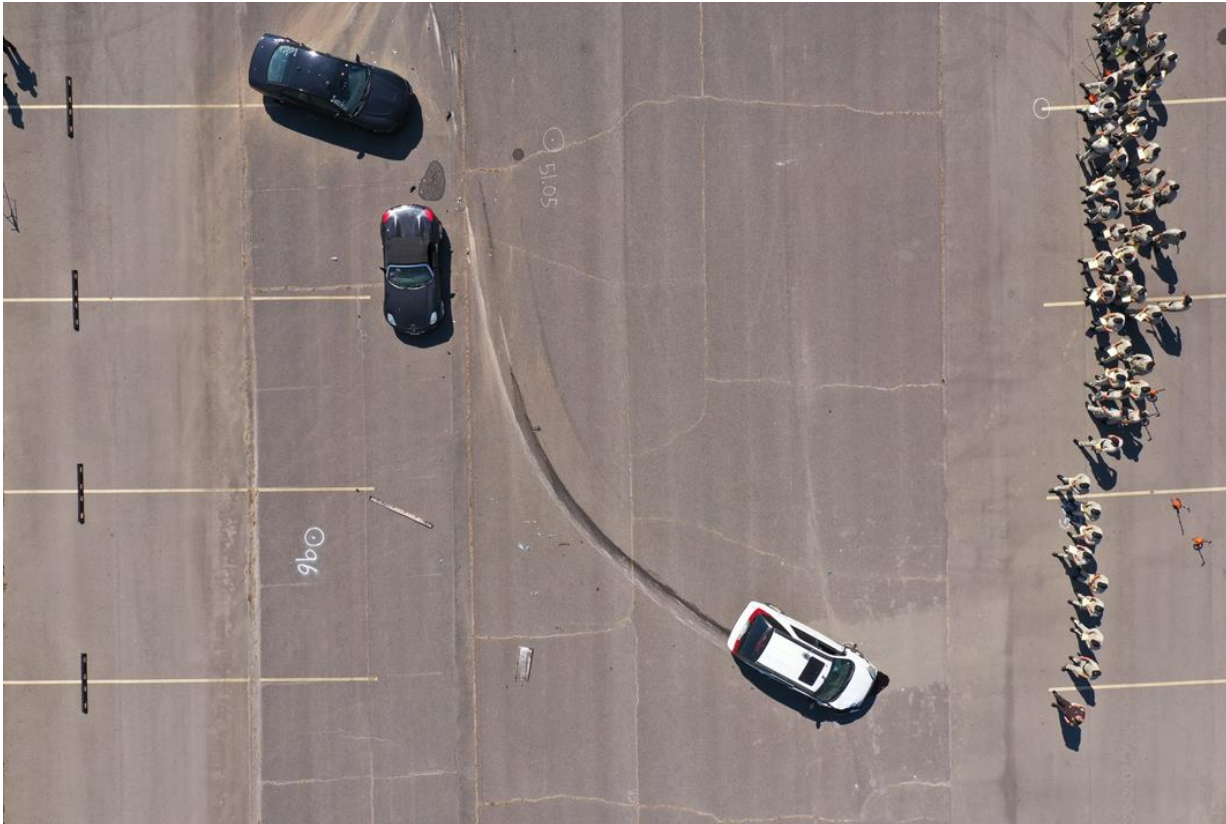
OHP - TIM Quick Clearance

- Every fatality on a highway in Oklahoma is Investigated and reported on by OHP Traffic Homicide Unit (THU)
- Highways are shut down during all investigations
- A survey is required
- Total Station – Standard
- Average of 36 min to complete
- Minimum Data Points



OHP - TIM Quick Clearance

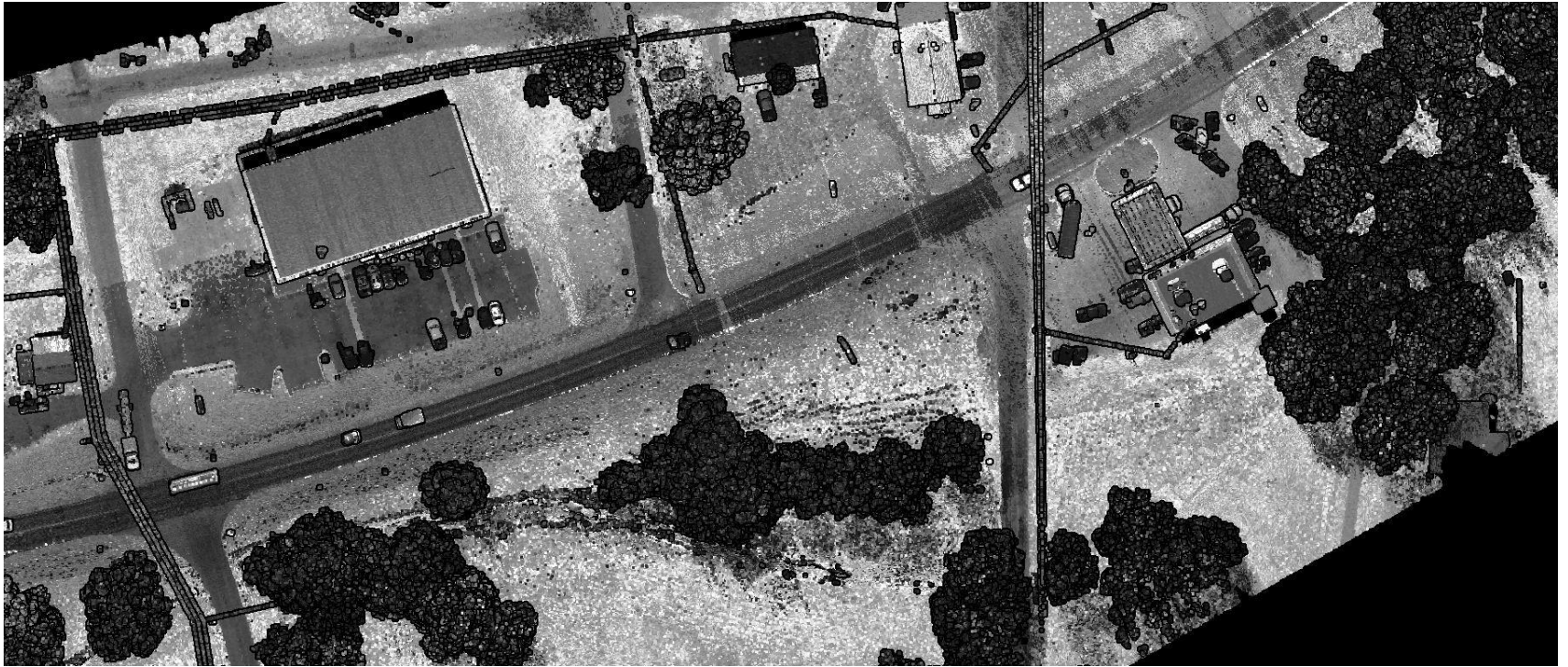
- OHP with ODOT applied for a STIC Grant in 2019 – \$75,000 – 80/20
- Expand the OHP Drone Program by 14 drones
- Since May 14th, 2020 - 164 missions - 15 min 35 second average



Survey – No program at ODOT



Survey



Survey

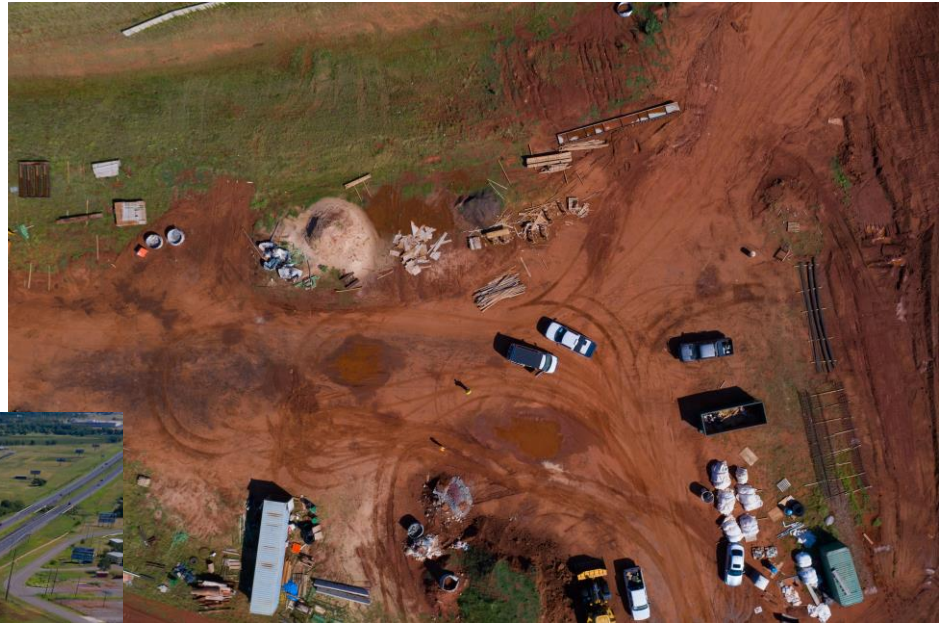


Survey



Future – Construction Management

- Construction Inspection
- Daily reporting
- Quantity Estimate
- Progress



Future – Construction Management



Future – Other Possibilities

- Project Scoping
- Structural Inspection
- Survey
- Environmental Reporting
- Storm water



State Wide Contract

- <https://www.ok.gov/dcs/solicit/app/index.php>

SW Number	Solicitation Number	Description
SW1060C	<u>SW1060C</u>	Unmanned Vehicles -
SW1060E	<u>SW1060E</u>	Unmanned Vehicles -
SW1060P	<u>SW1060P</u>	Unmanned Vehicles -
SW1060R	<u>SW1060R</u>	Unmanned Vehicles -

Questions?

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