

WIRELESS NETWORK CONSULTING

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RMT03 Othello– Rocky Mountain Towers

HEIGHT ANALYSIS

2024

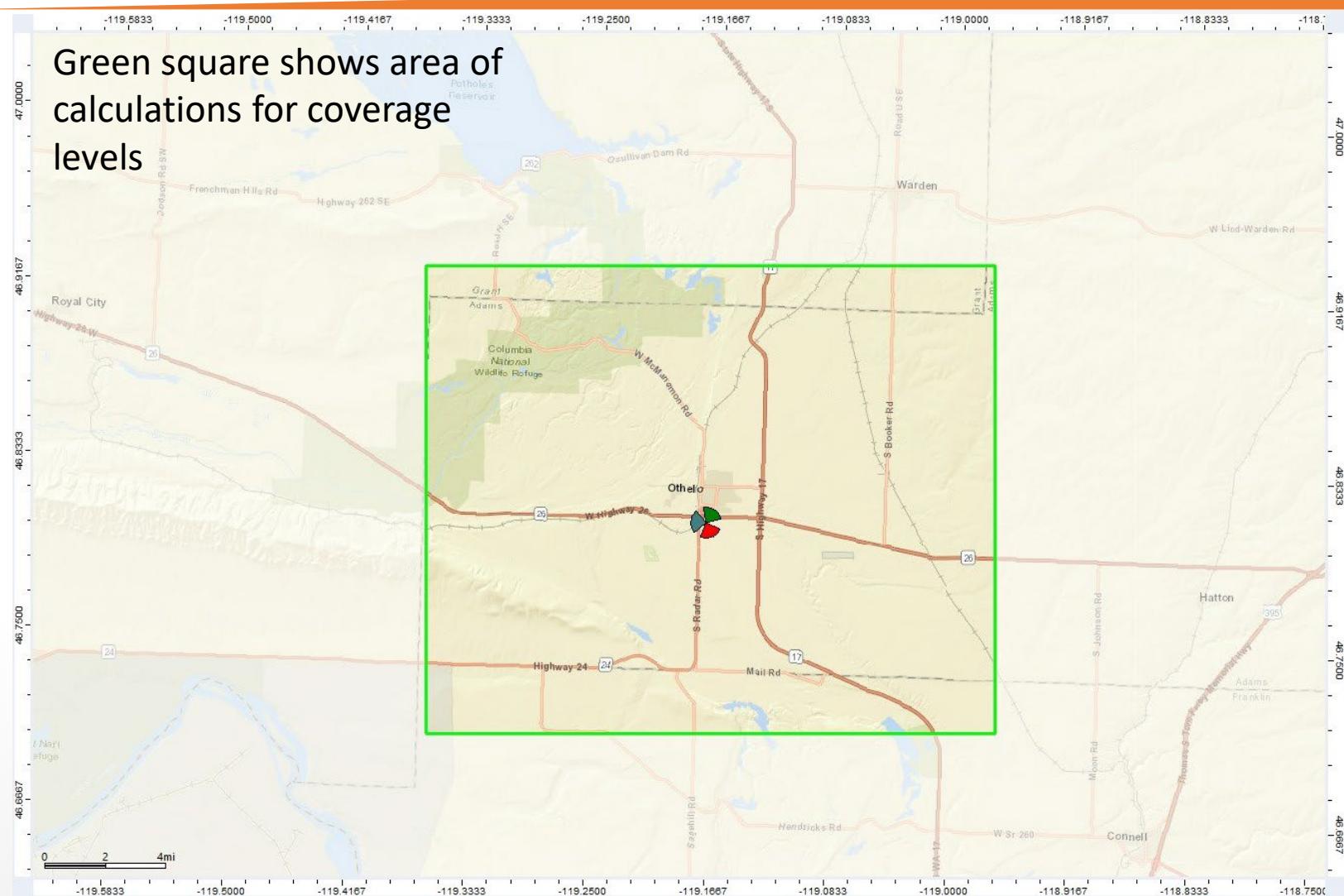
Height Analysis

- † Requested to review reasoning why Maverick is requesting a 150' AGL Tower
- † Review will include top tenant as well as lower tenants due to the lower height will impact them greater
- † To reduce the number of towers constructed the heights need to be tall enough to accommodate multiple tenants

Proposed Site

- † 150' SST Proposed Tower Location
 - Latitude: 46.808692 N (NAD83)
 - Longitude: -119.171549 W (NAD83)
- † Tower can have (4) tenants
- † Mounting Heights
 - 146' AGL Antenna Centerline
 - 133' AGL Antenna Centerline
 - 120' AGL Antenna Centerline
 - 107' AGL Antenna Centerline
- † This design has a 5' separation between antennas on different platforms for Radio Frequency interference control

Focus Zone

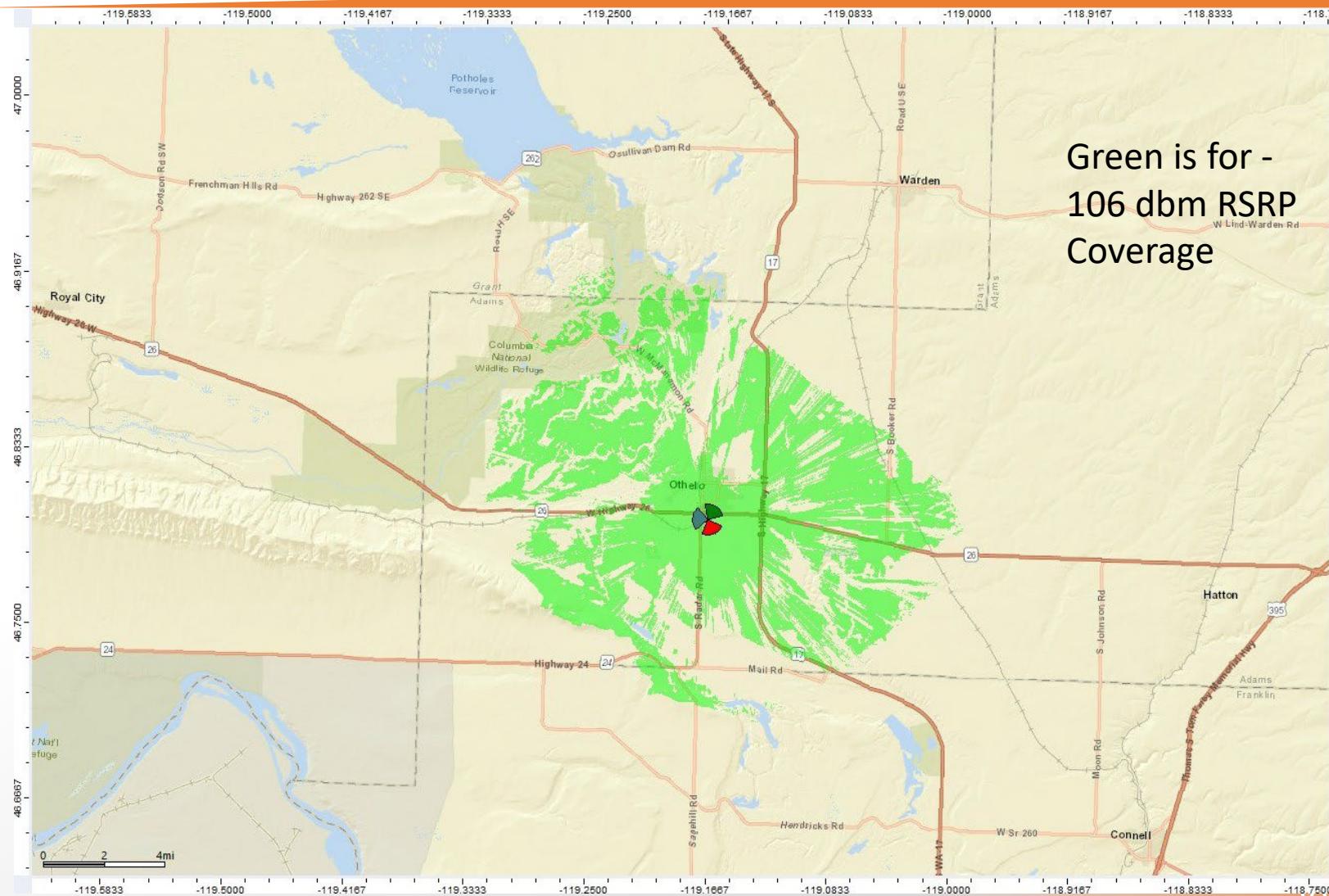


RSRP mid band

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WISP Coverage 146' C/L

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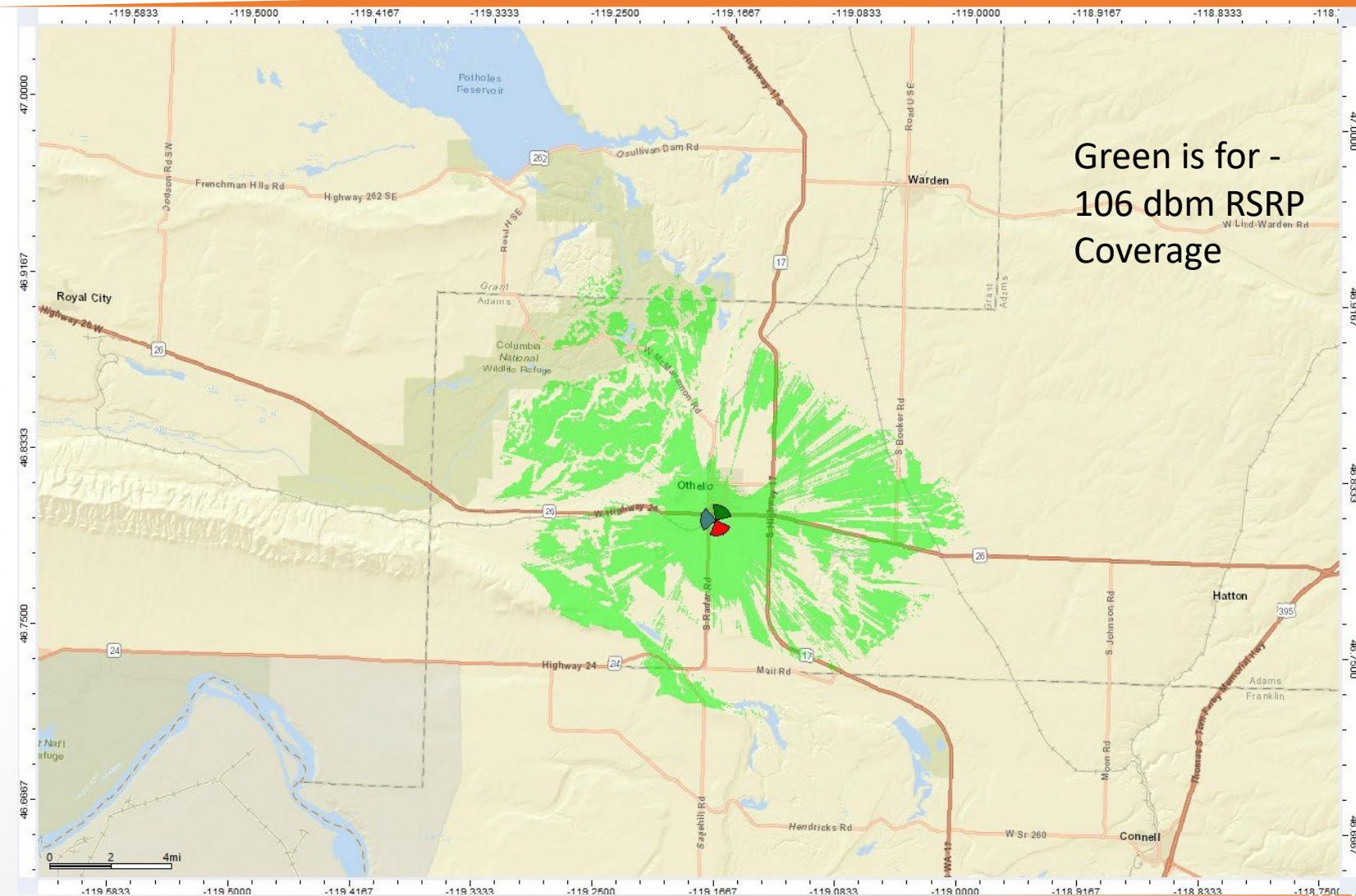


Green is for -
106 dbm RSRP
Coverage

RSRP mid band

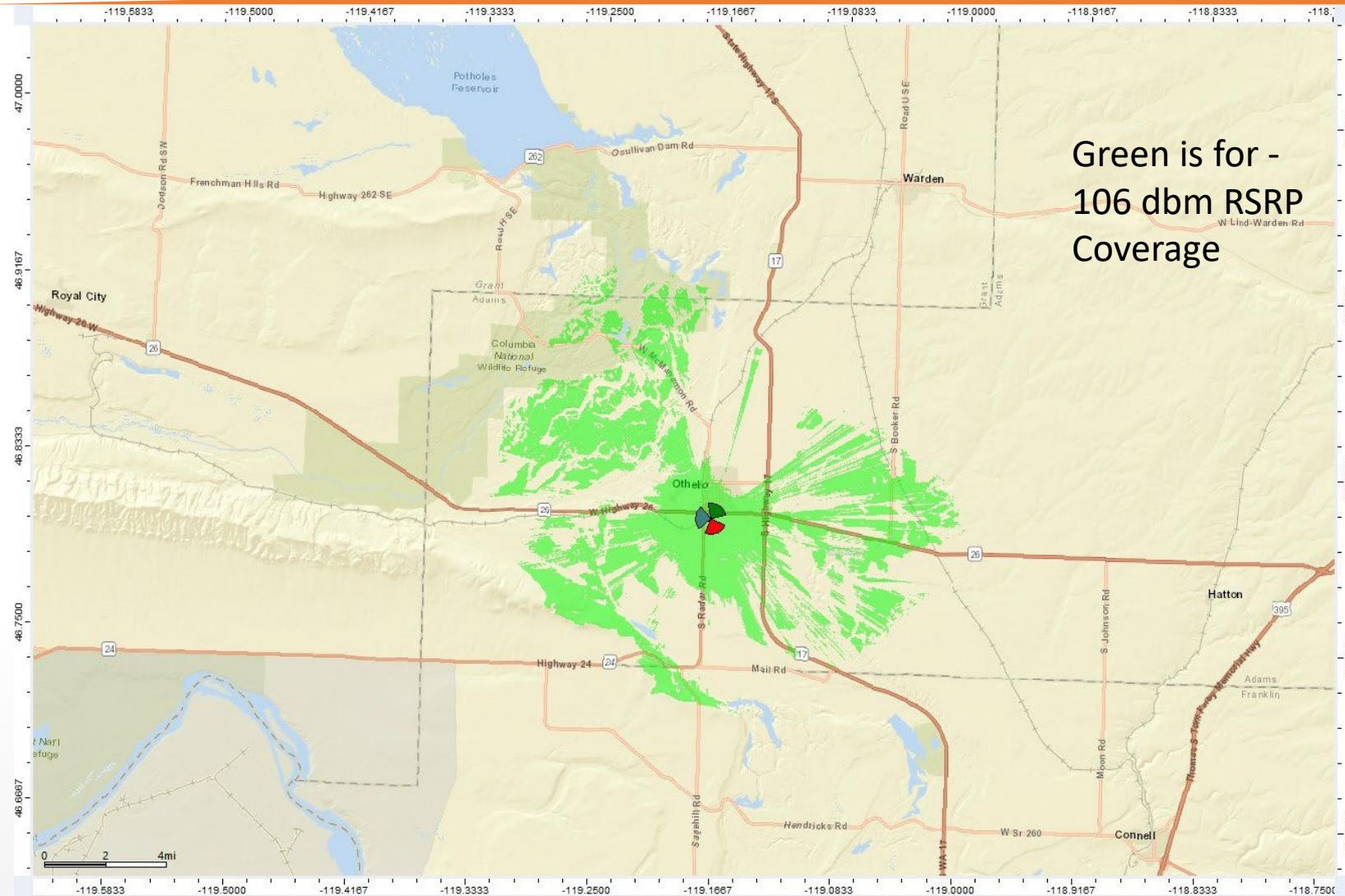
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WISP Coverage 116' C/L



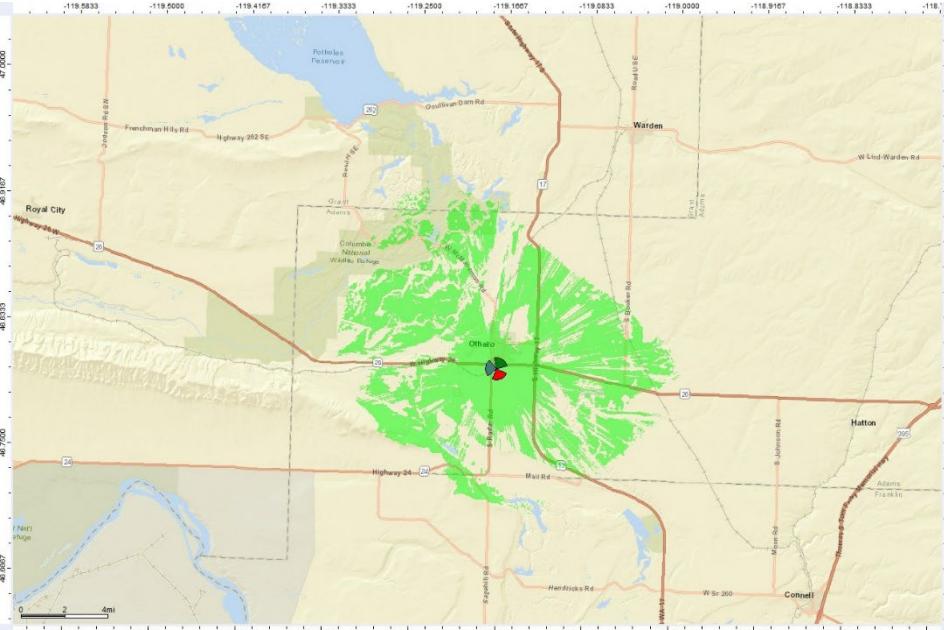
RSRP mid band WISP Coverage 96' C/L

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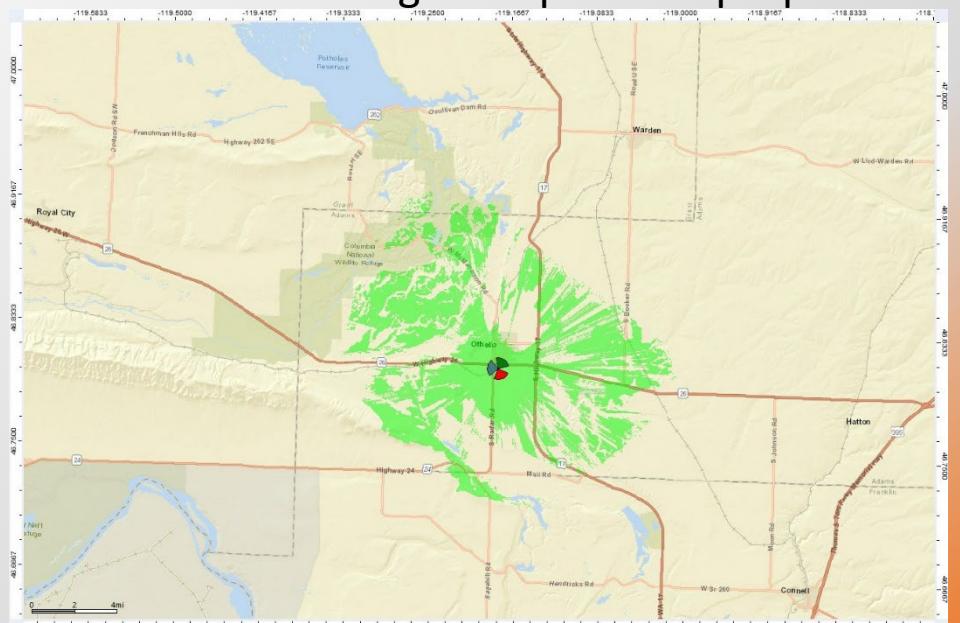
RSRP Coverage – mid band

146' AGL vs 116' AGL



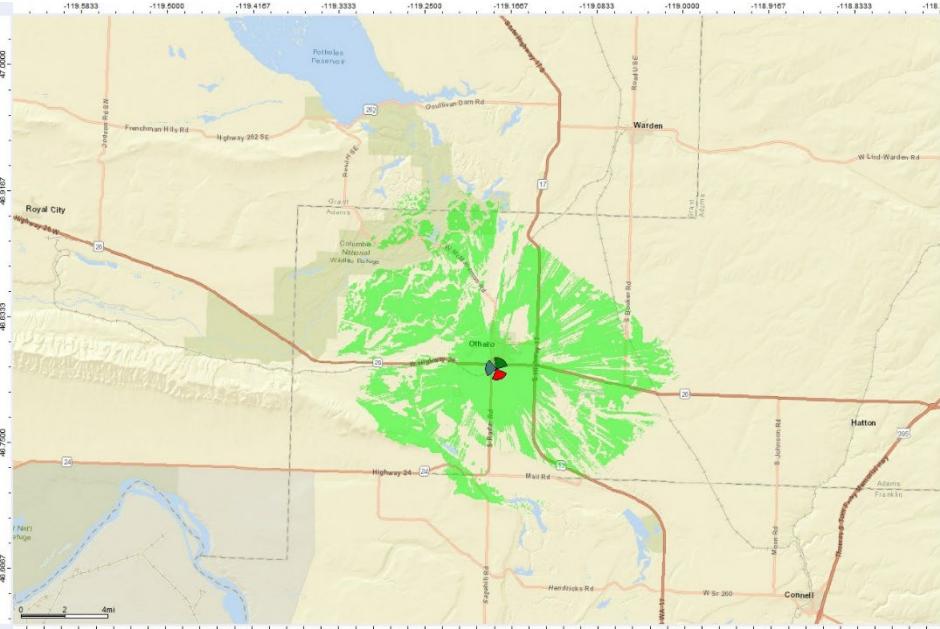
Zone	Prediction	Legend	Zone Surface (km²)	Surface (km²)	% of Covered Area	% Focus Zone
Focus Zone	LTE_NW-Mobility_RSRP-dBm (0)	RSRP Level (DL) (dBm) >= -106	748.898732	215.347488	100	28.8
				215.347488	100	28.8

Left Picture and upper table Proposed data showing **216.3** square kilometers are covered with service vs lower picture, lower left table showing data showing **181.93** square kilometers covered with indoor service a **16%** reduction in coverage compared to proposed.



RSRP Coverage – mid band

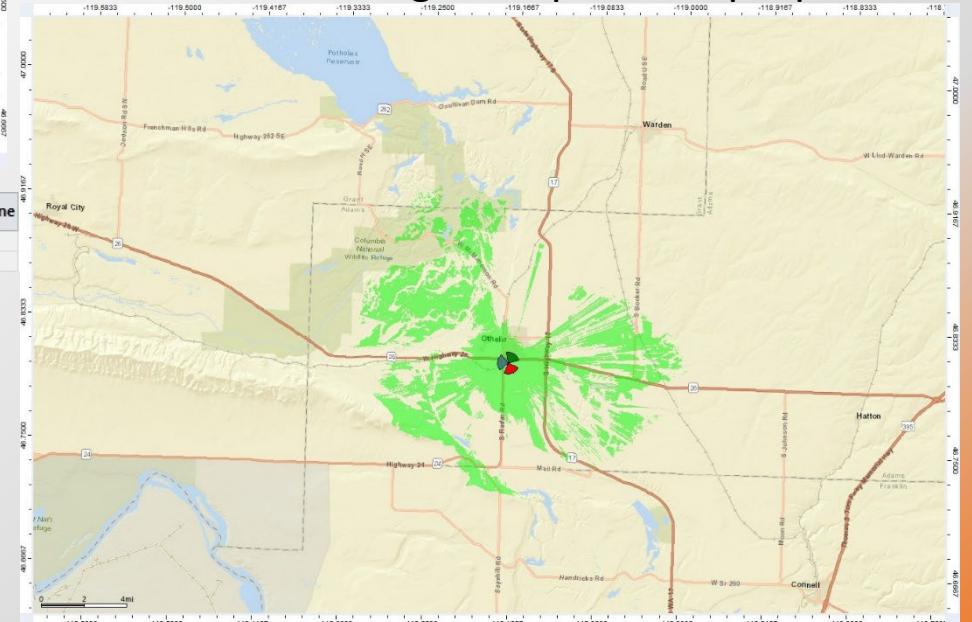
146' AGL vs 96' AGL



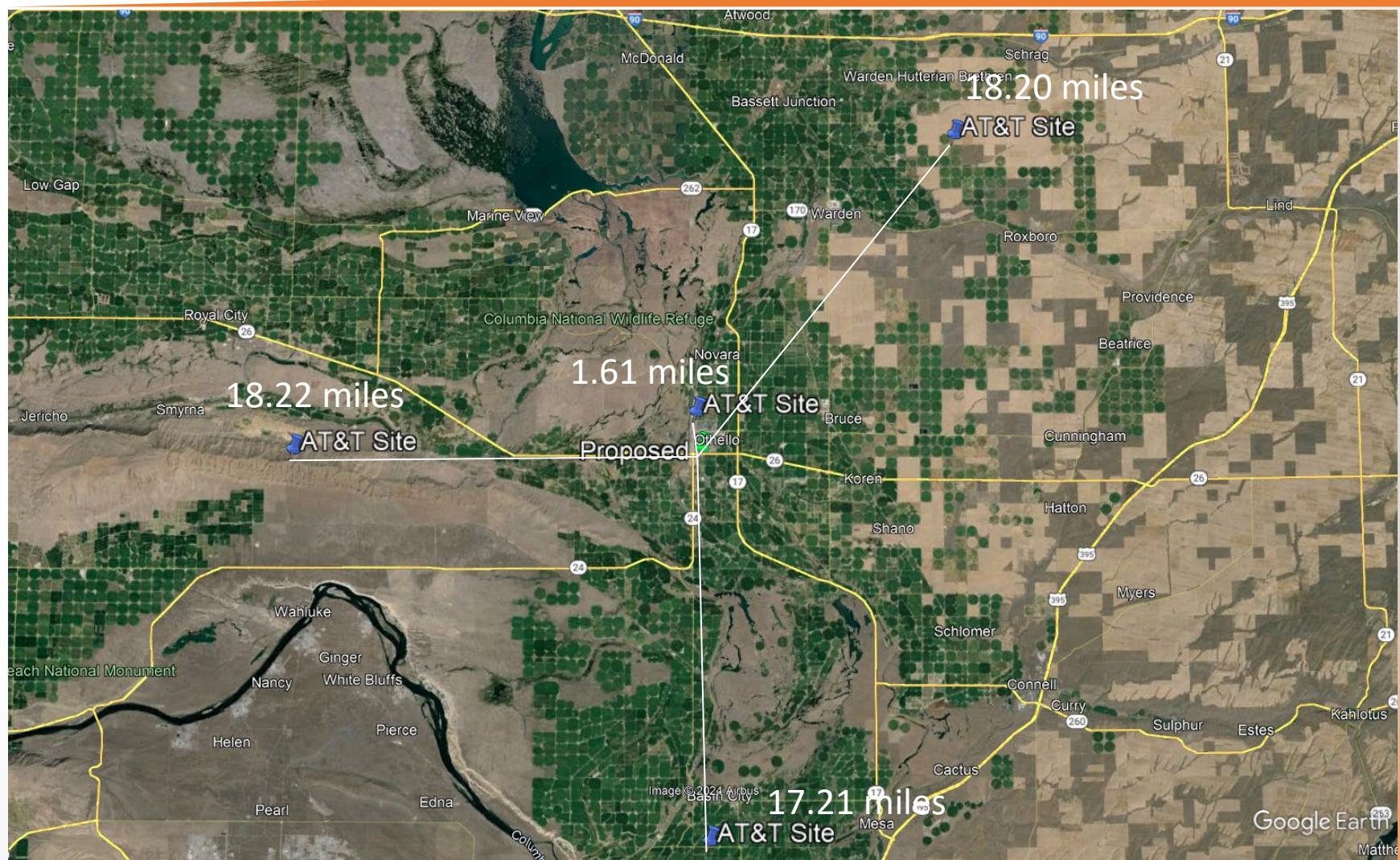
Zone	Prediction	Legend	Zone Surface (km ²)	Surface (km ²)	% of Covered Area	% Focus Zone
Focus Zone	LTE_NW-Mobility_RSRP-dBm (0)		748.898732	149.960693	100	20
		RSRP Level (DL) (dBm) >= -106		149.960693	100	20

Zone	Prediction	Legend	Zone Surface (km ²)	Surface (km ²)	% of Covered Area	% Focus Zone
Focus Zone	LTE_NW-Mobility_RSRP-dBm (0)		748.898732	215.347488	100	28.8
		RSRP Level (DL) (dBm) >= -106		215.347488	100	28.8

Left Picture and upper table Proposed data showing **216.3** square kilometers are covered with service vs lower picture, lower left table showing data showing **149.96** square kilometers covered with service **31%** reduction in coverage compared to proposed.



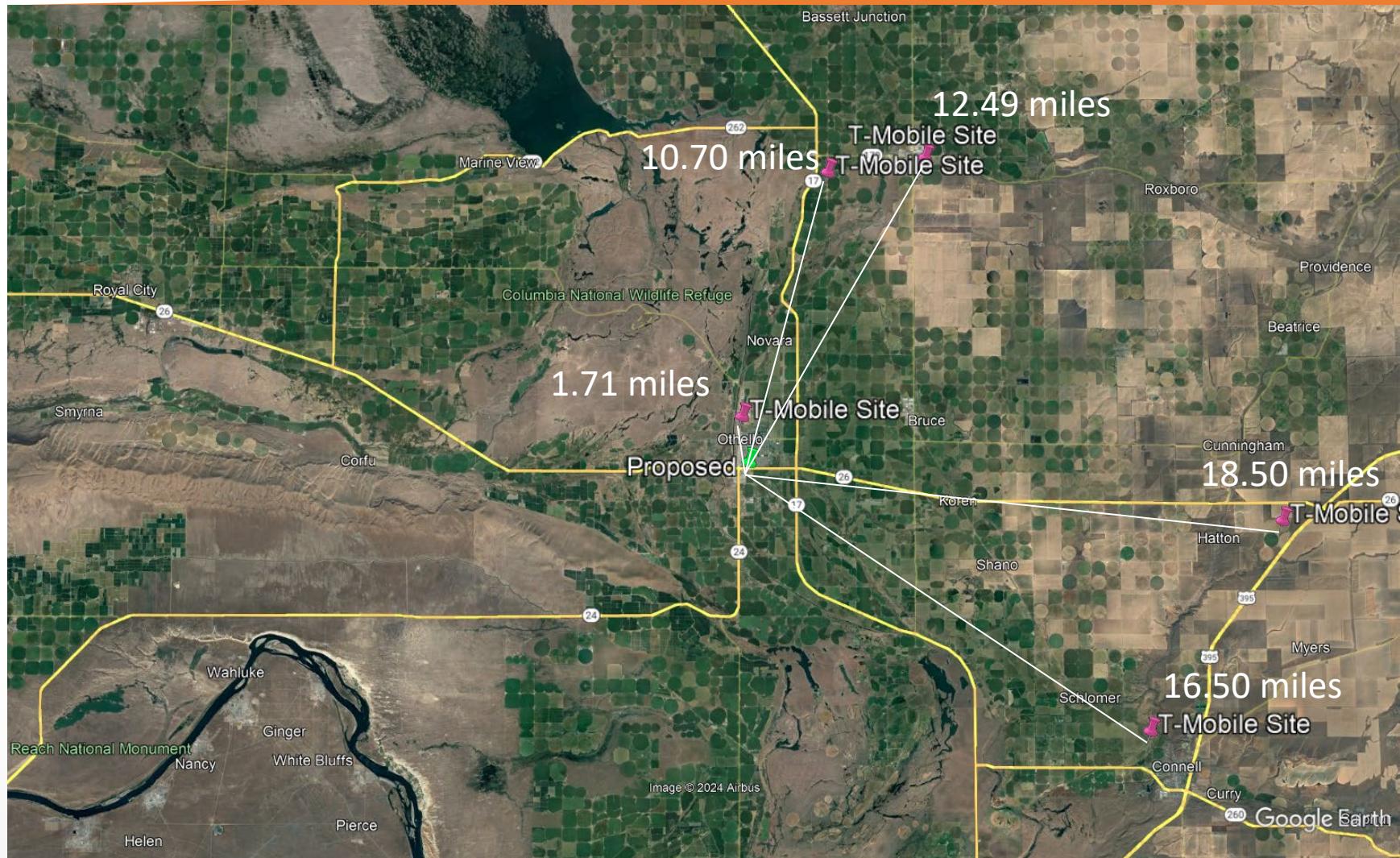
AT&T Neighboring Sites



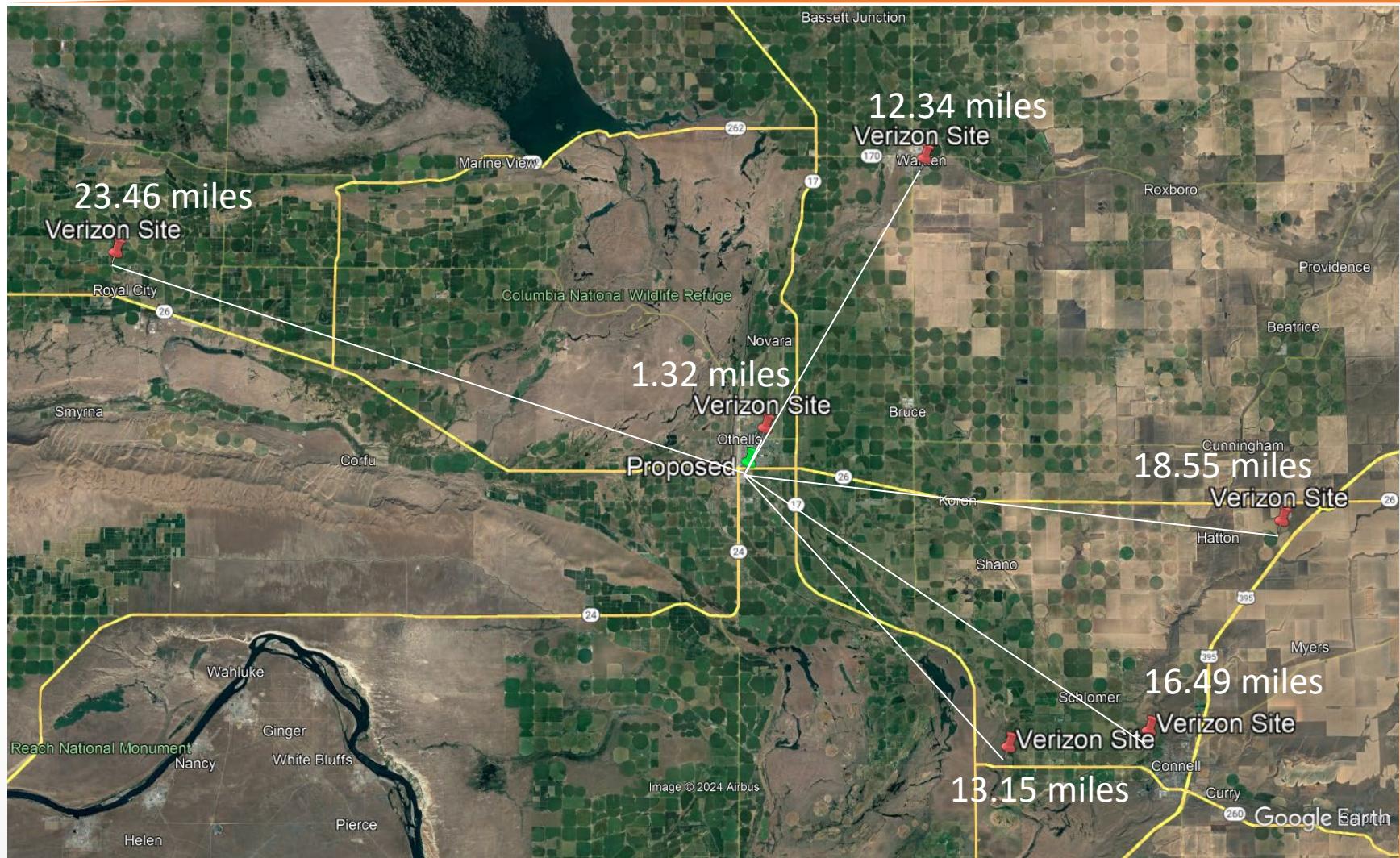
Average distance to neighbor sites: 13.81 miles

2024

T-Mobile Neighboring Sites



Verizon Neighboring Sites



Average distance to neighbor sites: 11.98 miles

2024

Conclusions

- † Restrictions on height limit the coverage area of a site
- † Antenna centerlines were ran at 146', 116' and, 96'
- † This was done assuming a 150', 120' and, 100' tower height
- † Worst case shows a 31% reduction in coverage for the WISP provider and will limit how many other tenants can collocate on the structure

Recommendations

- † Recommend approval of the proposed at the height requested to allow for multiple tenants to locate on the tower