Summary: Jonesboro, AR
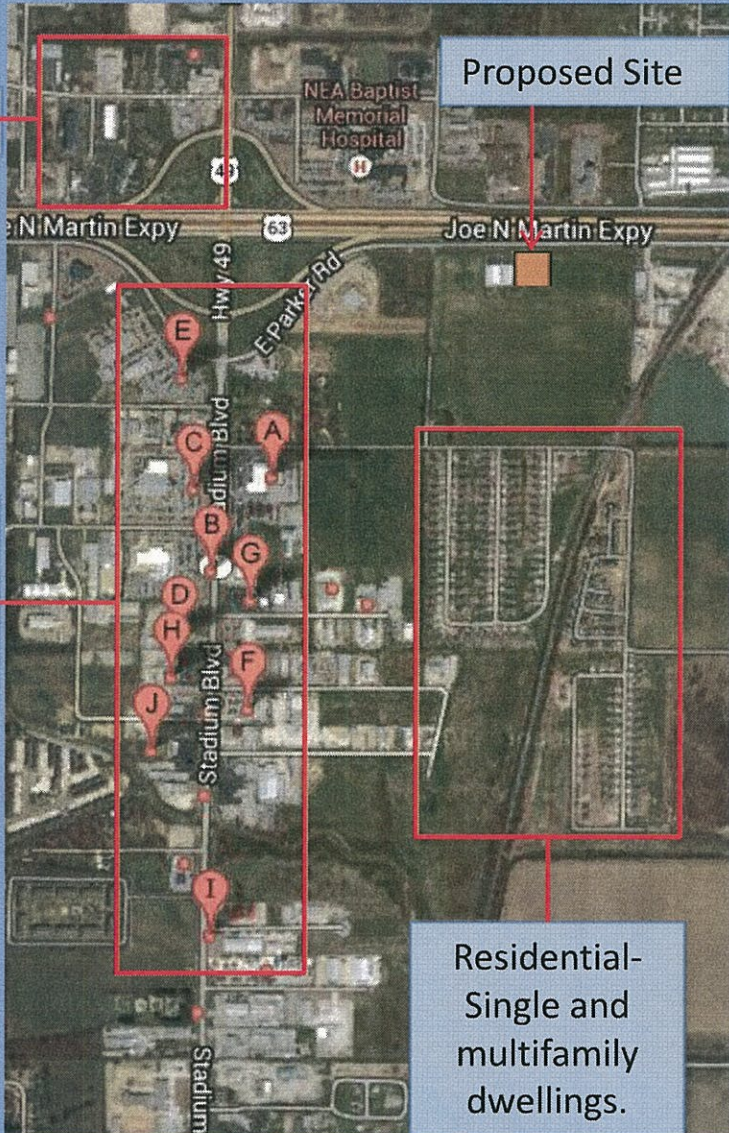# ARU1516_"Methodist Hospital"

- New site planned to address capacity issues on surrounding tower locations near the intersection of Red Wolf Blvd. and Joe Martin Expressway.

- Area hosts several residential neighborhoods and apartments, numerous automobile dealerships, multiple hotels/ motels, and a hospital.

- Due to RF spectrum constraints, 4th carrier is the final 3G carrier that can be deployed in the area to address capacity concerns without requiring additional site locations. Maximum carriers already deployed on surrounding sites. 4G LTE has also been deployed, but area still experiences capacity issues.

- New sites (cell splits) are required to offload existing sites and provide quality service in the long term.

- Data usage has increased dramatically since the launch of the I-phone and other "smart" devices.

- Failure to address capacity issues will result in site blocking (fast busy's) and lower data speeds and subsequent customer dissatisfaction.

- Increased area capacity and higher site count helps to ensure redundancy and lessens impact to the network and mobile users in local emergency situations (storms, traffic accidents, etc.) or other high call volume scenarios.
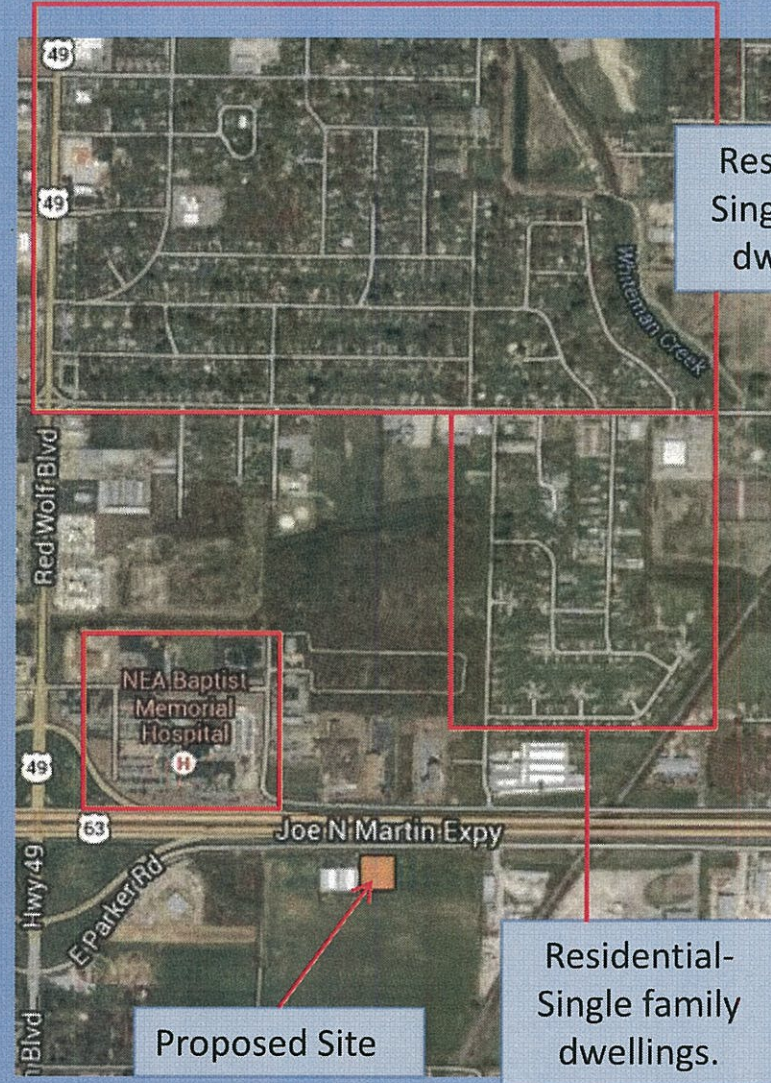
Area Description
ARU1516_"Methodist Hospital"

Hospitality

Automobile dealerships south of Expressway

Proposed Site

NEA Baptist Memorial Hospital

Residential- Single and multifamily dwellings.
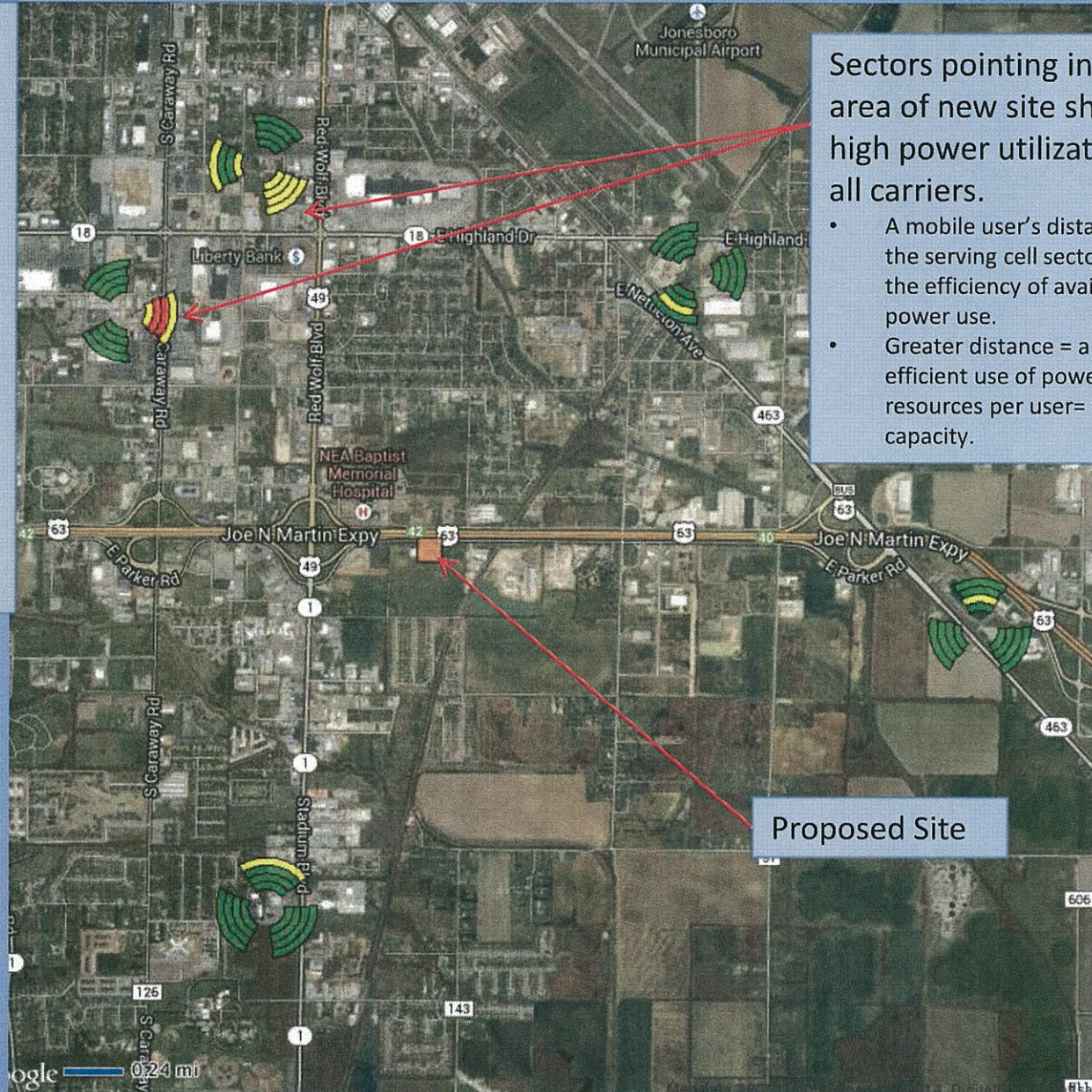
Residential- Single family dwellings.

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Proposed Site

Busy Hour-Non HS (Voice Only) Power Utilization % ARU1516_"Methodist Hospital"
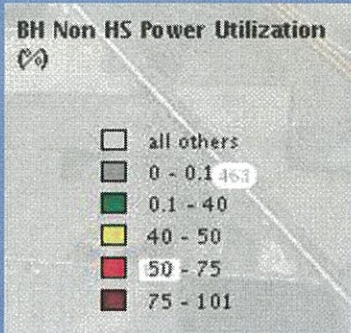
EXPLANATION:

On 3G and 4G networks, power, code, and bandwidth are <u>shared resources</u>. During peak traffic periods, these resources become less available as more user devices access the base stations. This specific area has been identified as a high usage area. The new tower location has been designed to offload the surrounding towers and improve overall capacity and quality of voice and data service.

Sectors pointing into area of new site showing high power utilization on all carriers.

- A mobile user's distance from the serving cell sector affects the efficiency of available power use.
- Greater distance = a less efficient use of power resources per user= less area capacity.

Proposed Site

BH Non HS Power Utilization (%)

☐	all others
☐	0 - 0.1
■	0.1 - 40
■	40 - 50
■	50 - 75
■	75 - 101

Busy Hour-Code Utilization %
ARU1516_"Methodist Hospital"

EXPLANATION:

On 3G and 4G networks, power, code, and bandwidth are underlined shared resources. During peak traffic periods, these resources become less available as more user devices access the base stations. This specific area has been identified as a high usage area. The new tower location has been designed to offload the surrounding towers and improve overall capacity and quality of voice and data service.

Sectors pointing into area of new site showing very high code utilization on multiple carriers.

Proposed Site

BH Code Utilization (%)

☐	all others
☐	0 - 0.1
☐	0.1 - 1
☐	1 - 30
☐	30 - 50
☐	50 - 70
☐	70 - 80
☐	80 - 110

0.24 mi