



1/31/2019

Kittitas County
Community Development Services
411 N. Ruby St, Suite 2
Ellensburg, WA 98926

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FEB 04 2019
Kittitas County CDS

Re: AT&T's Radio Frequency (RF) Engineering Justification for the Proposed Wireless Communications Facility in Kittitas County: Teanaway FirstNet NSB- YA4795 at COORDINATES: 47.183124, -120.693696

To Whom It May Concern,

Enclosed please find the RF Justification document prepared for AT&T's proposed new wireless communications facility at the above noted location. This letter serves as my verification, to the best of my knowledge, of the accuracy of the RF information, propagation maps, and analysis provided in the attached RF Justification.

Thank you for your consideration of this information.

Sincerely,

Kung-Liang Brian Lin
RF Engineer
AT&T Mobility

A handwritten signature in black ink, appearing to read "Kung-Liang Brian Lin". The signature is stylized and somewhat cursive.



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**YA4795 Teanaway
RF Justification**

Coverage Justification

AT&T is proposing to build a new wireless communication facility (“WCF”), YA4795 Teanaway, located South of Hwy-97 / Hwy-970 and 0.3mil from the junction of Hwy97 and Bettas Rd. This proposed new WCF is intended to provide seamless coverage along the major roads in the area in AT&T’s high band 4G LTE coverage experienced by its customers in this side of Ellensburg. This will provide continuous service along Hwy-97, Hwy-970 and Lauderdale Junction. This proposed WCF is also part of a more significant, state-wide initiative by AT&T to upgrade existing wireless sites and to build new sites, including in rural area with less coverage, to support the FirstNet Network and deploy the new frequency band (“Band 14”).

Exhibit A—Search Ring. AT&T Engineers evaluated locations within the original targeted search ring (Exhibit A) as possible locations for the proposed new WCF.

Exhibit B—Coverage Gap. Exhibit B identifies the location of the proposed new WCF (red star). As noted above, the locations of existing WCFs providing continuous service along Hwy-97, Hwy-970 and Lauderdale Junction. Existing coverage from WCF sites is shaded in green. As can be seen, there is a large 4G LTE 700 MHz coverage gap in all areas not shaded in green. This coverage gap was determined through a combined analysis of customer complaints, service requests, and from RF engineering design. Currently, the target coverage area has minimal 4G voice grade service and does not have adequate 4G LTE service within the 700 MHz frequency band. In addition to expanded coverage, the addition of new 4G LTE technology on the proposed new WCF will also reduce the number of dropped calls and otherwise address AT&T’s customers’ reported service issues in the area.

Exhibits C.1 and C.2 —Projected Coverage. Exhibit C.1 identifies the projected coverage from the proposed new WCF with the requested antenna tip height of 150 ft. Exhibit C.2 identifies the projected coverage from the alternative #1 new WCF with the available antenna tip height of 25 ft. The proposed antenna tip height is the minimum necessary to help fill the LTE 700 MHz coverage gap relative to nearby complementary wireless facilities and to support the FirstNet Network. This is also the height where an AT&T wireless device can be reliably used to make and receive telephone calls and use data service in the presence of varying signals.



at&t

Alternative Site Analysis

The location of the proposed new site and the alternative site discussed below is identified in **Exhibit D**.

Alternative Site #1: Existing FairPoint Tower (47.183369 / -120.693672) with 25 ft. available Tip height.

This alternative location is a collocation with an existing, solar wind tower located on the same property. The existing FairPoint tower is a 50' self-support structure. Due to RF interference concerns with the existing FairPoint site, the highest available antenna tip is way below the design requirement of at least 150'. With this option, AT&T will have difficulty providing seamless coverage along Hwy 97 & Hwy 970, and link with existing/planned sites in Cle Elum and Ellensburg. Thus, will not be able to meet the coverage requirement for this area. AT&T would need to ensure that the RF equipment would be able to propagate coverage according to the designed objective.

Exhibit B—Coverage Gap Existing & Planned AT&T LTE 700 MHz Coverage Target Service Area BEFORE Addition of Proposed New Wireless Facility

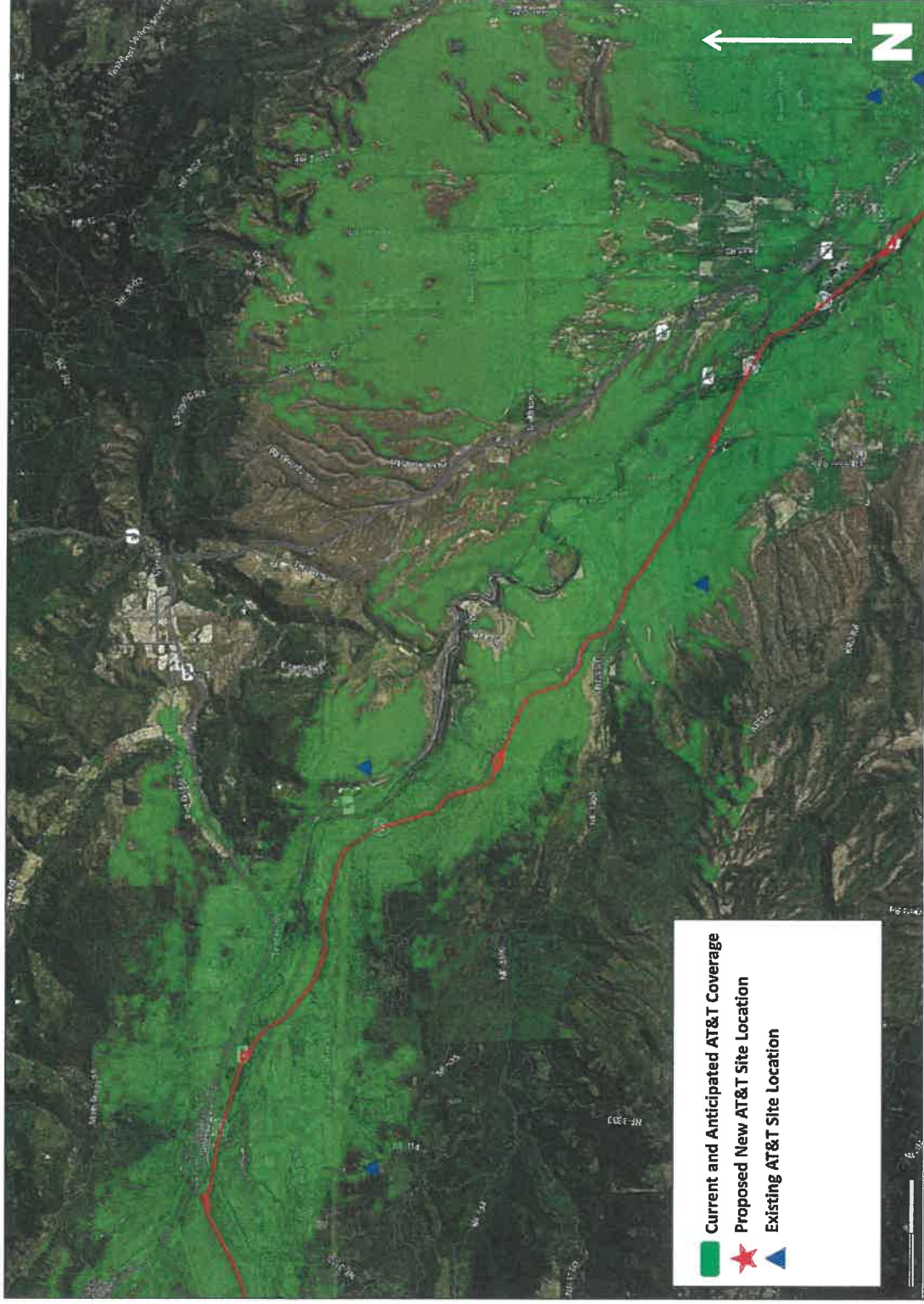


Exhibit C.1—Projected New AT&T LTE 700 MHz Coverage Coverage AFTER Proposed New Facility On-Air—150 ft. Antenna Tip

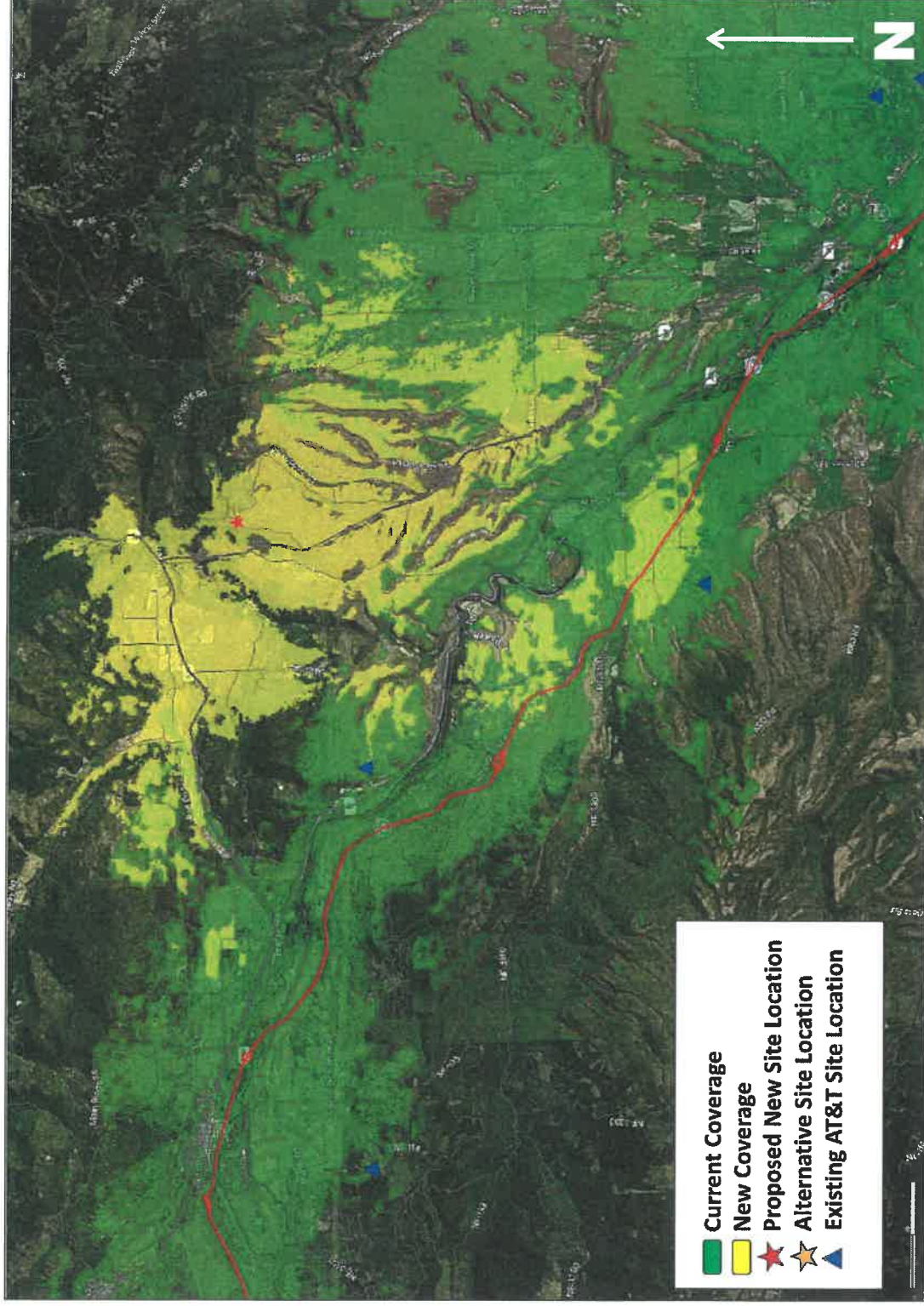


Exhibit C.2—Projected New AT&T LTE 700 MHz Coverage Coverage AFTER Alternative #1 facility On-Air—25 ft. Antenna Tip

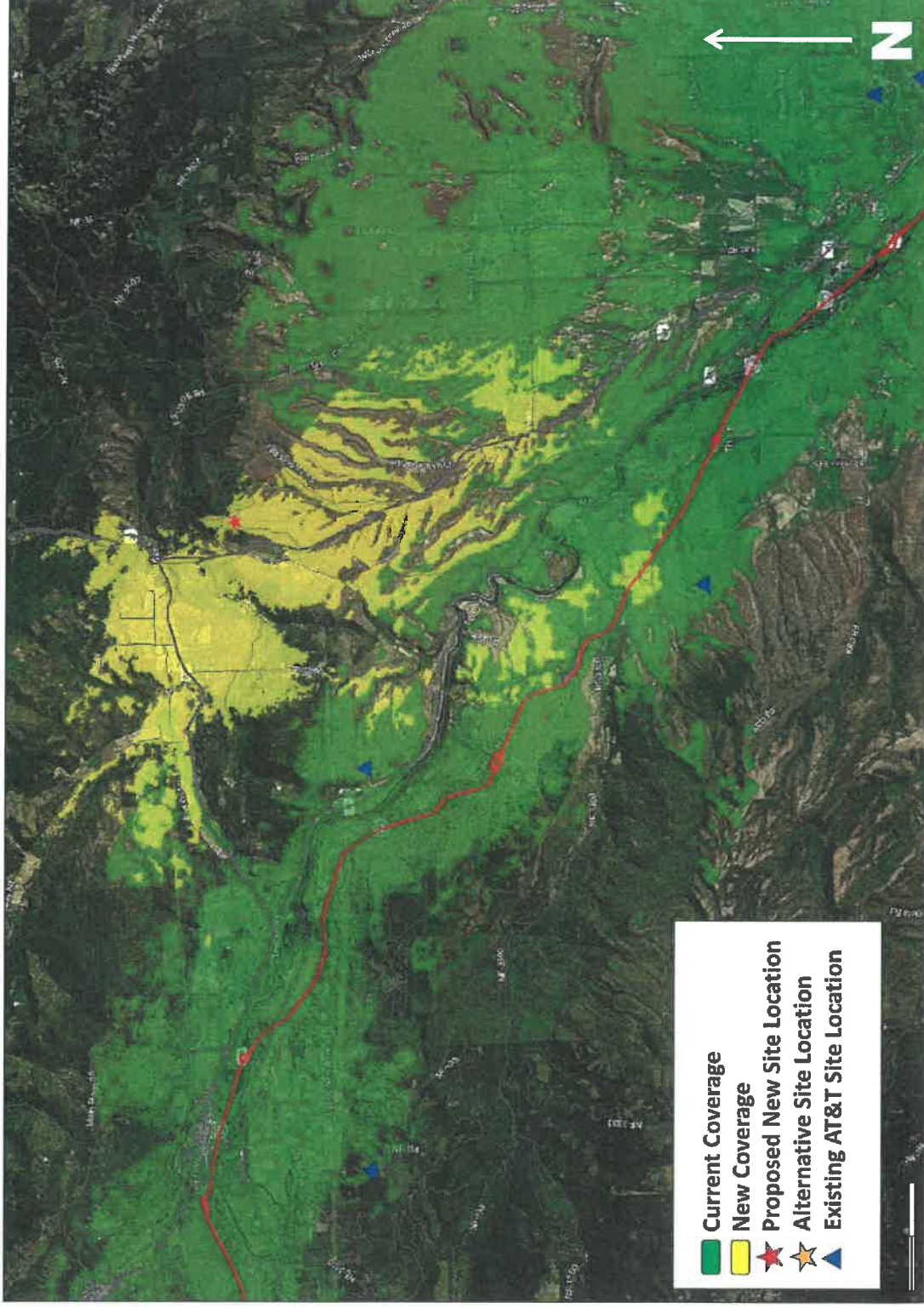


Exhibit D—Alternative Site Alternative Site Location

