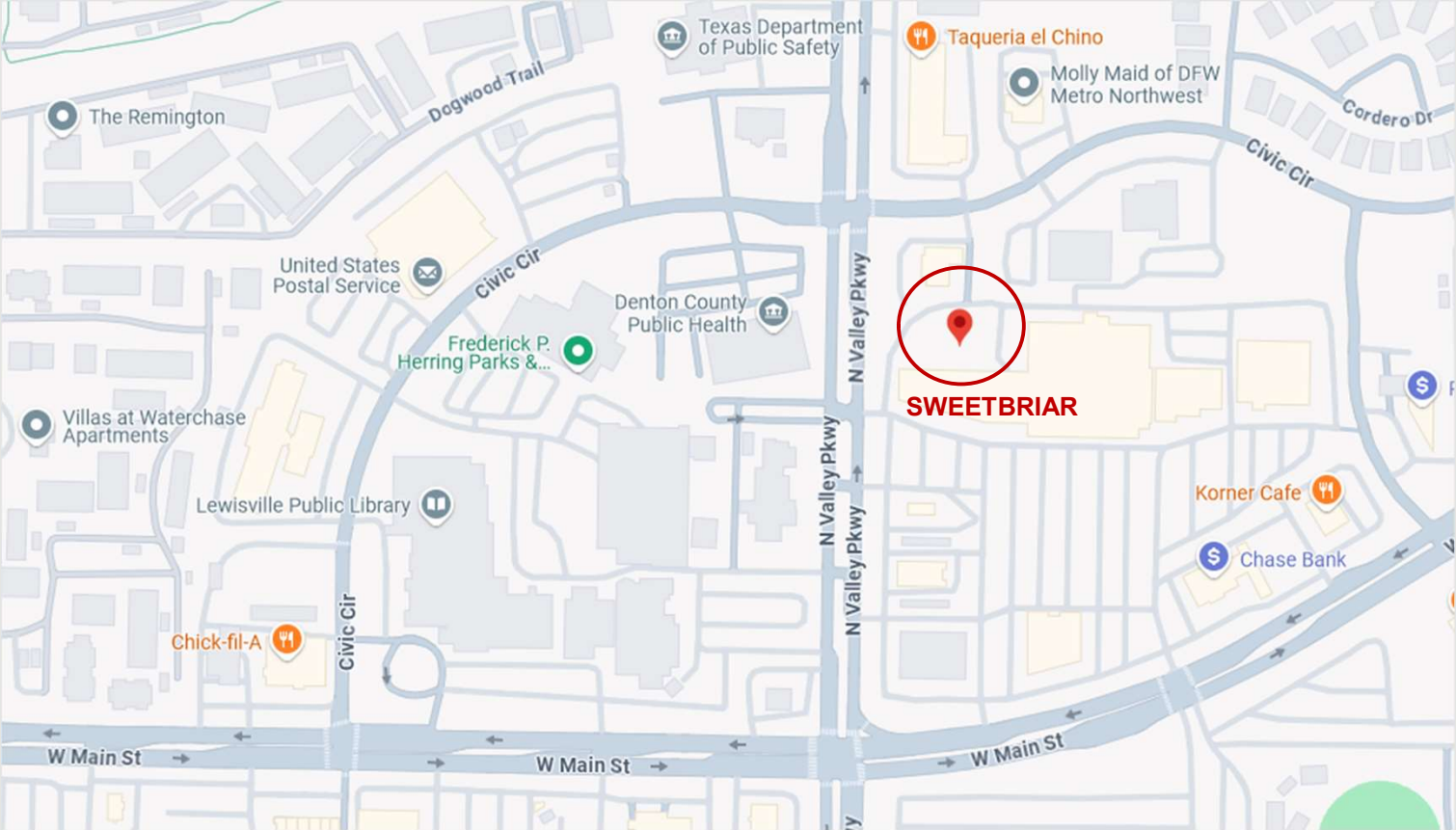


Verizon Wireless Communications Facility

Engineering Necessity Case – Proposed Verizon Site (SWEETBRIAR)



Prepared by: RF Engineering

30th April, 2025



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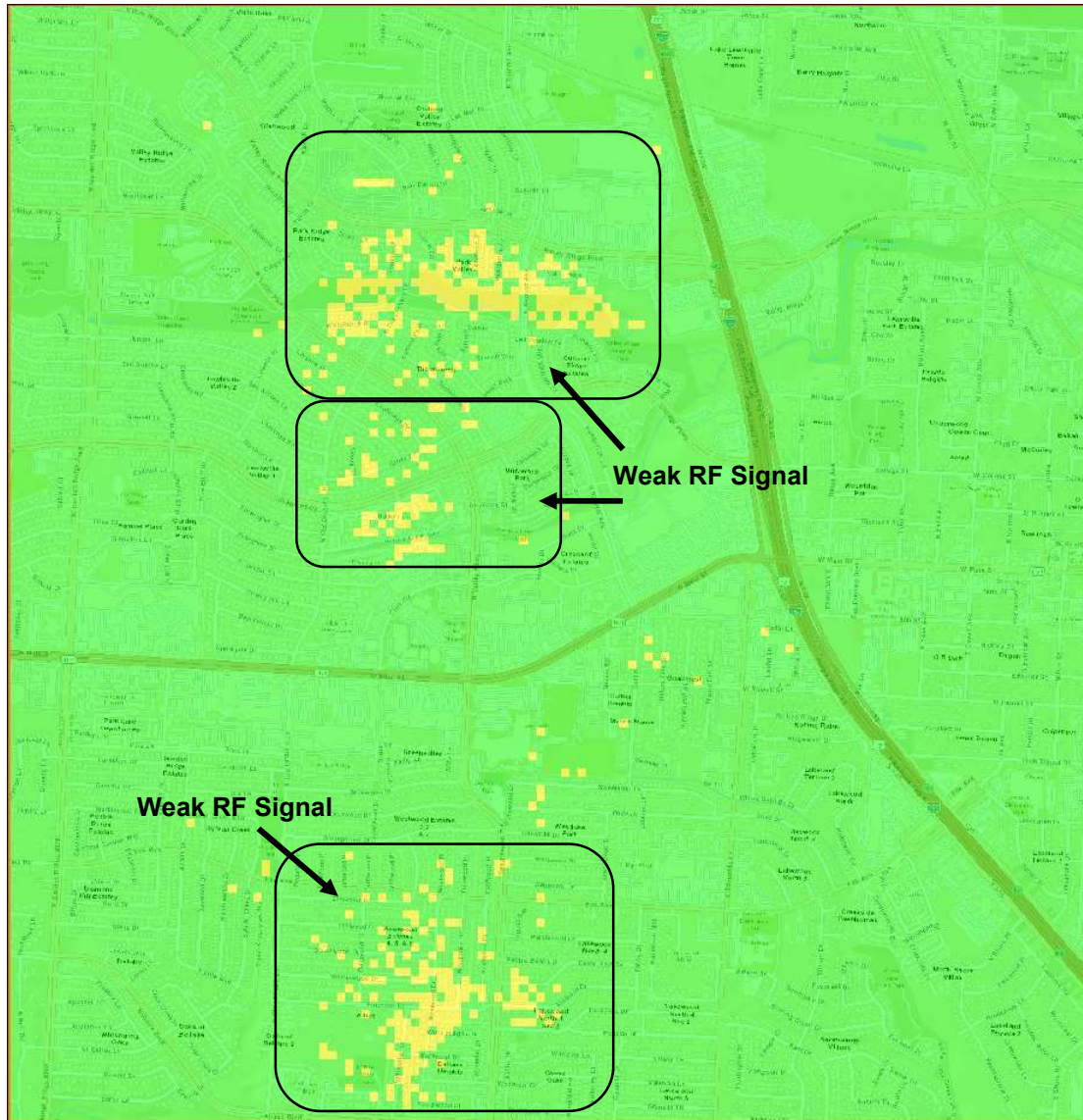
Objectives

This strategically located site directly addresses key engineering requirements for Verizon, yielding substantial benefits for customers:

- **Enhanced Network Performance:** Significantly improved indoor and outdoor coverage with increased capacity directly addresses current and projected demand. This results in a superior mobile experience with higher speeds and greater reliability.
- **Improved Emergency Services:** Enhanced network capacity ensures reliable 911 and emergency service connectivity, a critical safety measure for all customers.
- **Optimized Network Efficiency:** Strategically offloading traffic from congested sectors optimizes network performance, benefiting users connected to surrounding sites as well.
- **Support for Growth Areas:** The increased capacity effectively serves the civic center area including Lewisville Police Dept, Lewisville Municipal Court, Lewisville Public Library, Denton County Public Health, Fire Station, Texas Dept of Public Safety and other Important offices and Business in the area.
- **Enhanced Educational Resources:** Lewisville High School will benefit from dedicated capacity and throughput, ensuring reliable access to digital learning resources.
- **5G Expansion:** The site facilitates increased reliance on the 5G network, providing customers with faster speeds, lower latency, and a superior mobile experience.
- **Dominant Coverage Solution:** The proposed 90ft tower provides dominant coverage, effectively resolving capacity and throughput challenges while delivering comprehensive coverage to the targeted area.



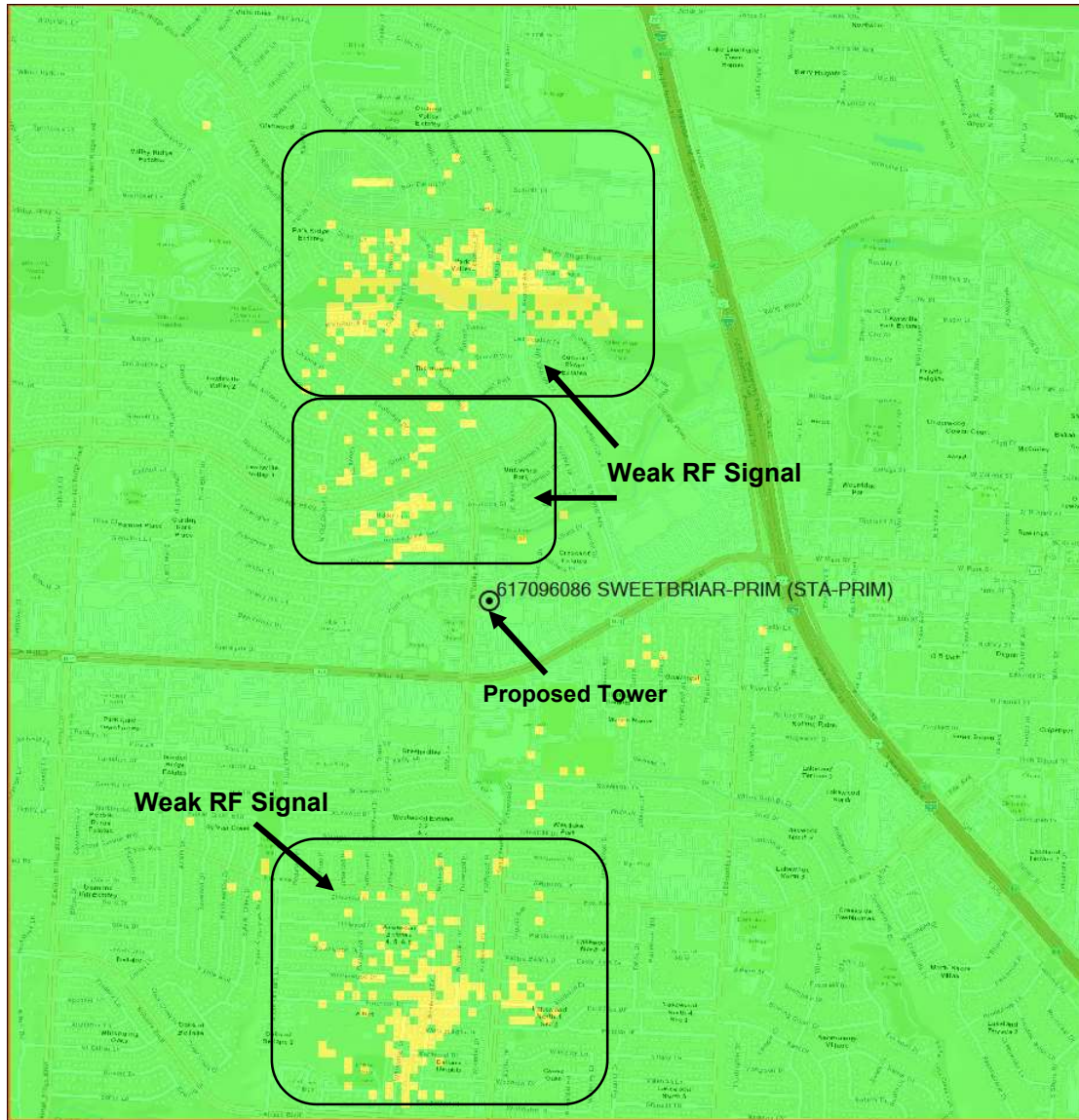
Existing 700 LTE Coverage in the Area




Note: RSRP plots in slides 3-10 are generated Using Forsk's Atoll tool.





Existing 700 LTE Coverage in the Area



Legend: RSRP levels(dbm)

 (-85 dbm)

 (-110 dbm)

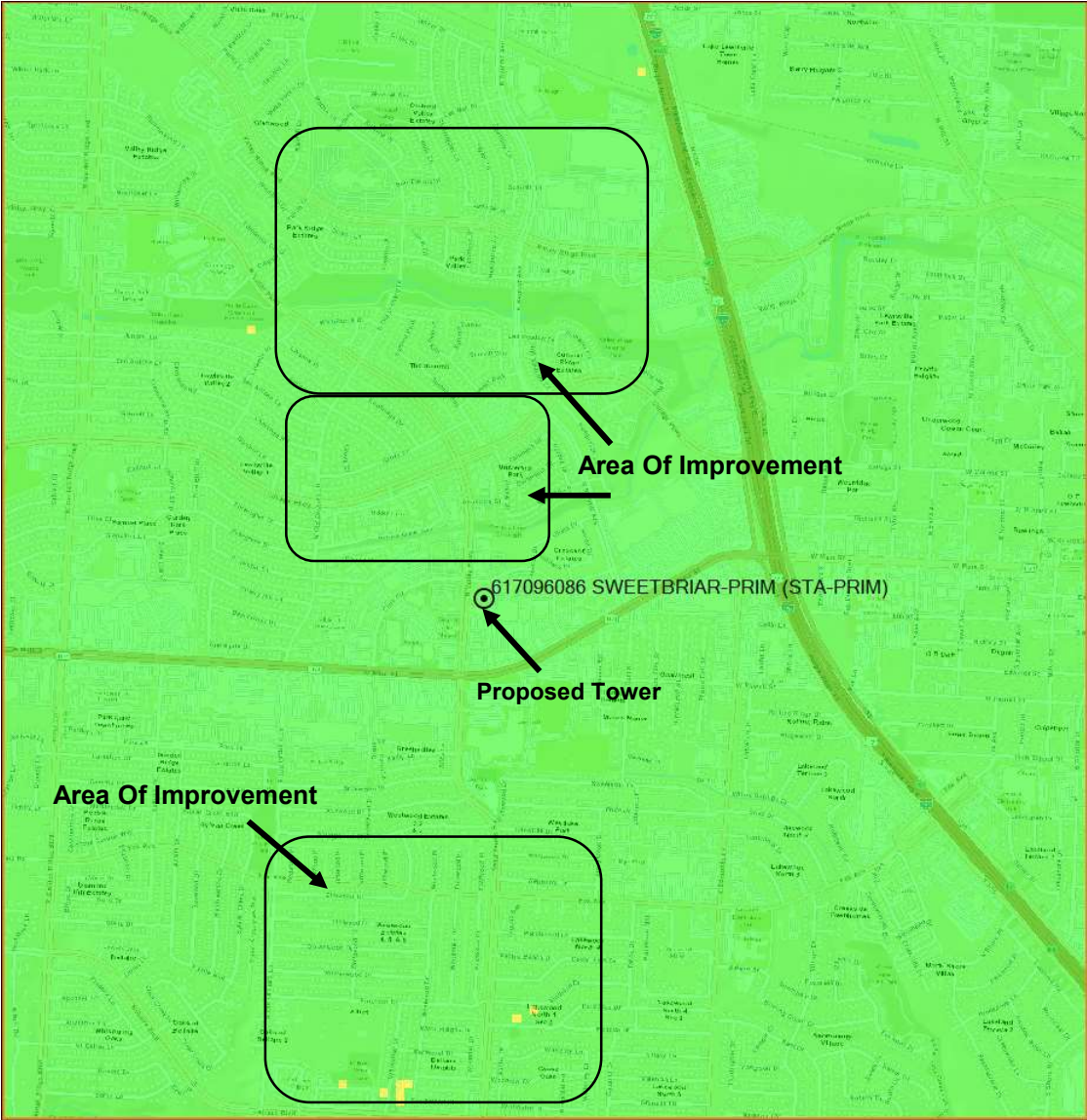
 (-120 dbm)

700MHz Service

Note: RSRP plots in slides 3-10 are generated Using Forsk's Atoll tool.



Proposed 700 LTE Coverage Using VERIZON Tower (SWEETBRIAR) at 90ft



Legend: RSRP levels(dbm)

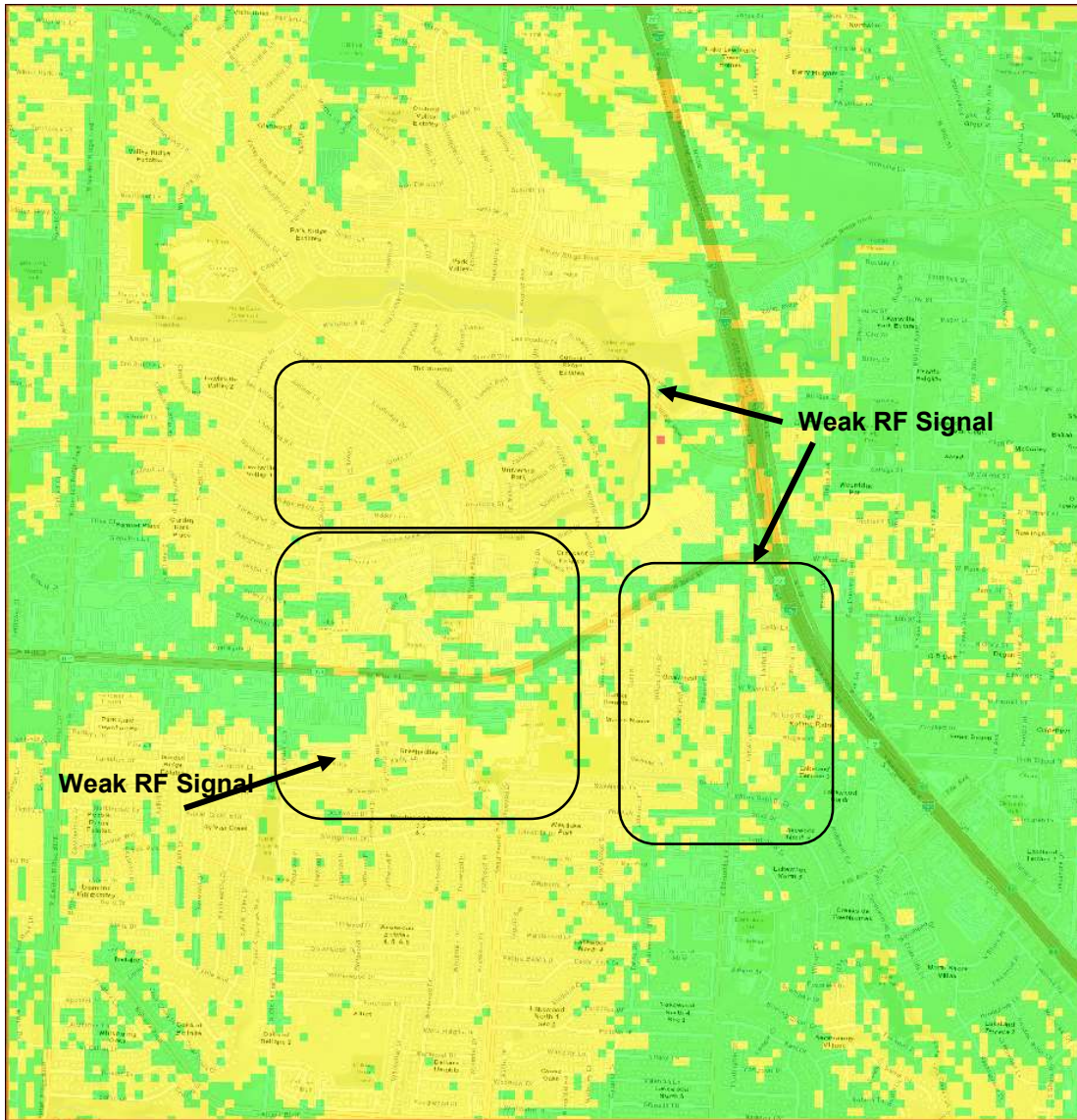
- (-85 dbm)
- (-110 dbm)
- (-120 dbm)

700MHz Service


Note: RSRP plots in slides 3-10 are generated Using Forsk's Atoll tool.





Existing AWS Coverage in the Area



Legend: RSRP levels(dbm)

 (-85 dbm)

 (-110 dbm)

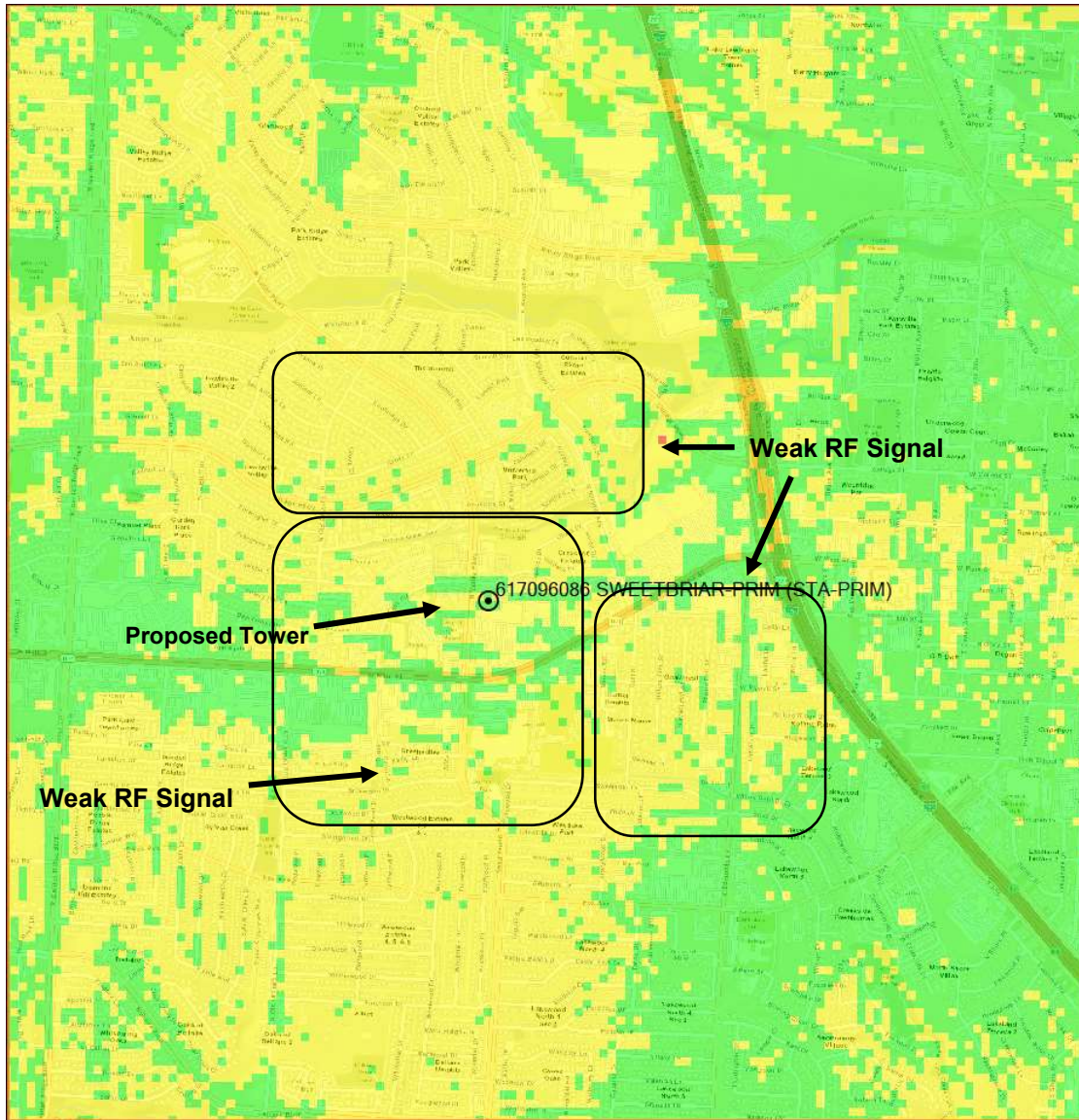
 (-120 dbm)

AWS Service

Note: RSRP plots in slides 3-10 are generated Using Forsk's Atoll tool.



Existing AWS Coverage in the Area



Legend: RSRP levels(dbm)

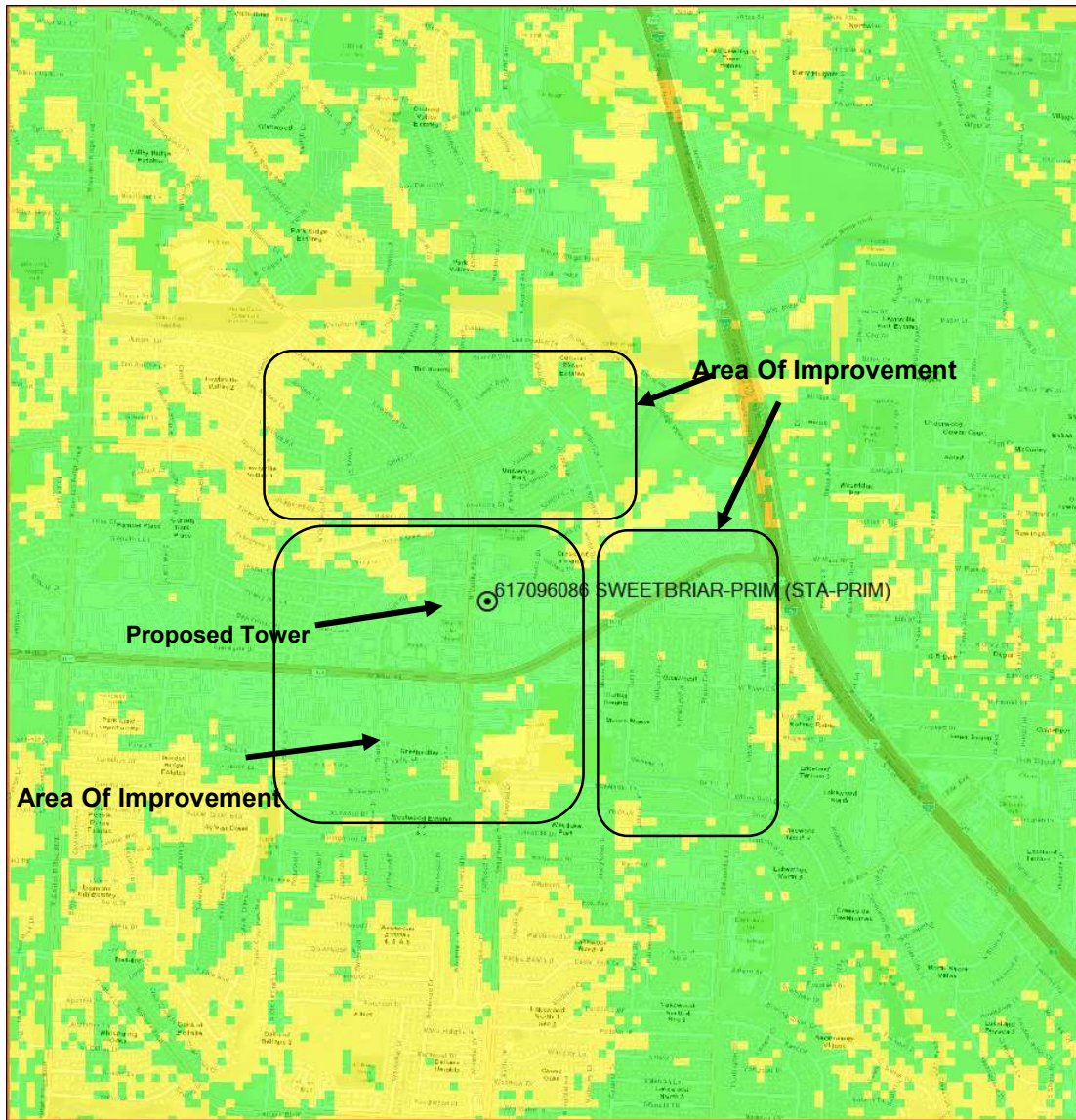
- (-85 dbm)
- (-110 dbm)
- (-120 dbm)

AWS Service

Note: RSRP plots in slides 3-10 are generated Using Forsk's Atoll tool.



Proposed AWS Coverage Using VERIZON Tower (SWEETBRIAR) at 90ft



Legend: RSRP levels(dbm)

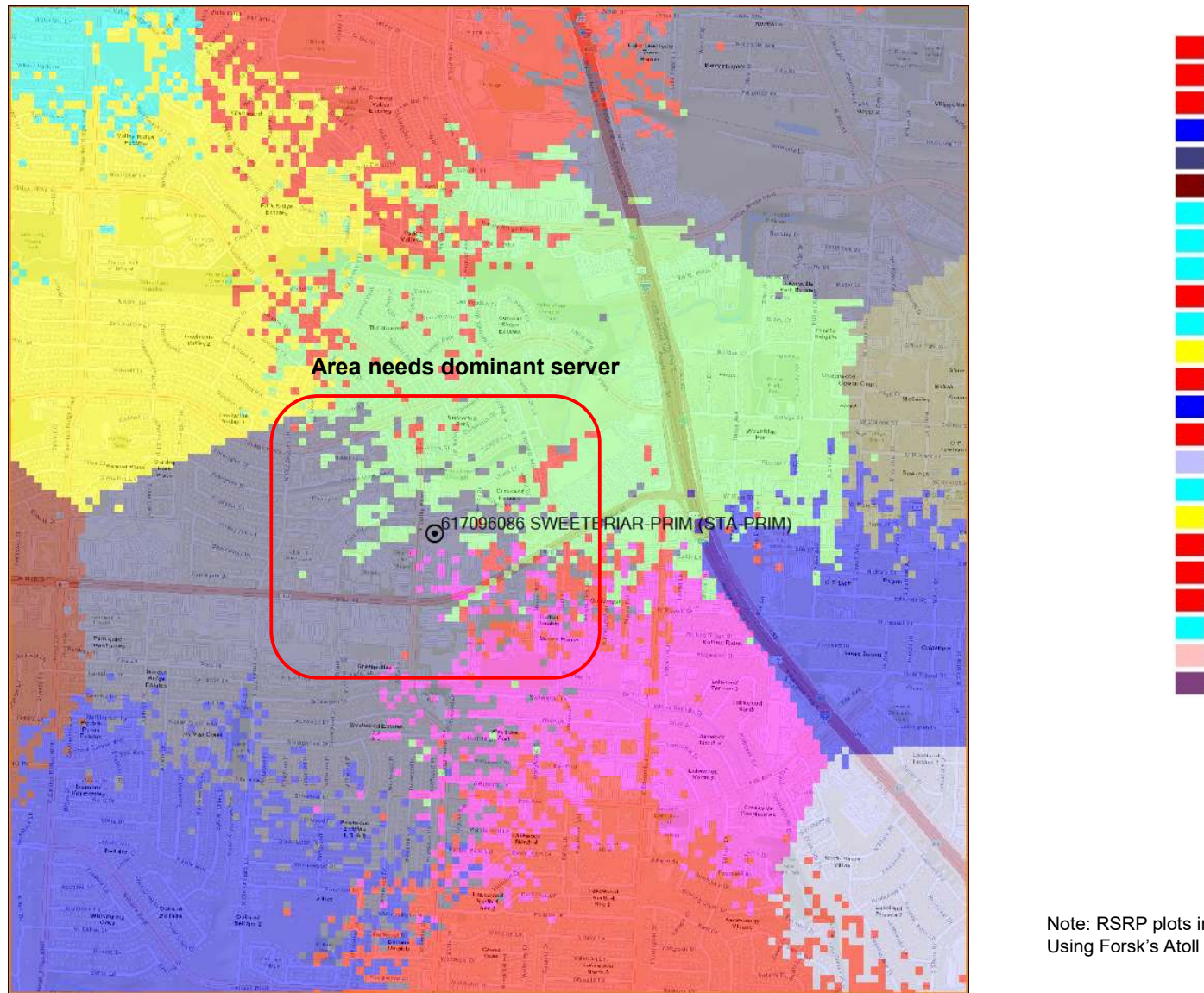
- (-85 dbm)
- (-110 dbm)
- (-120 dbm)

AWS Service

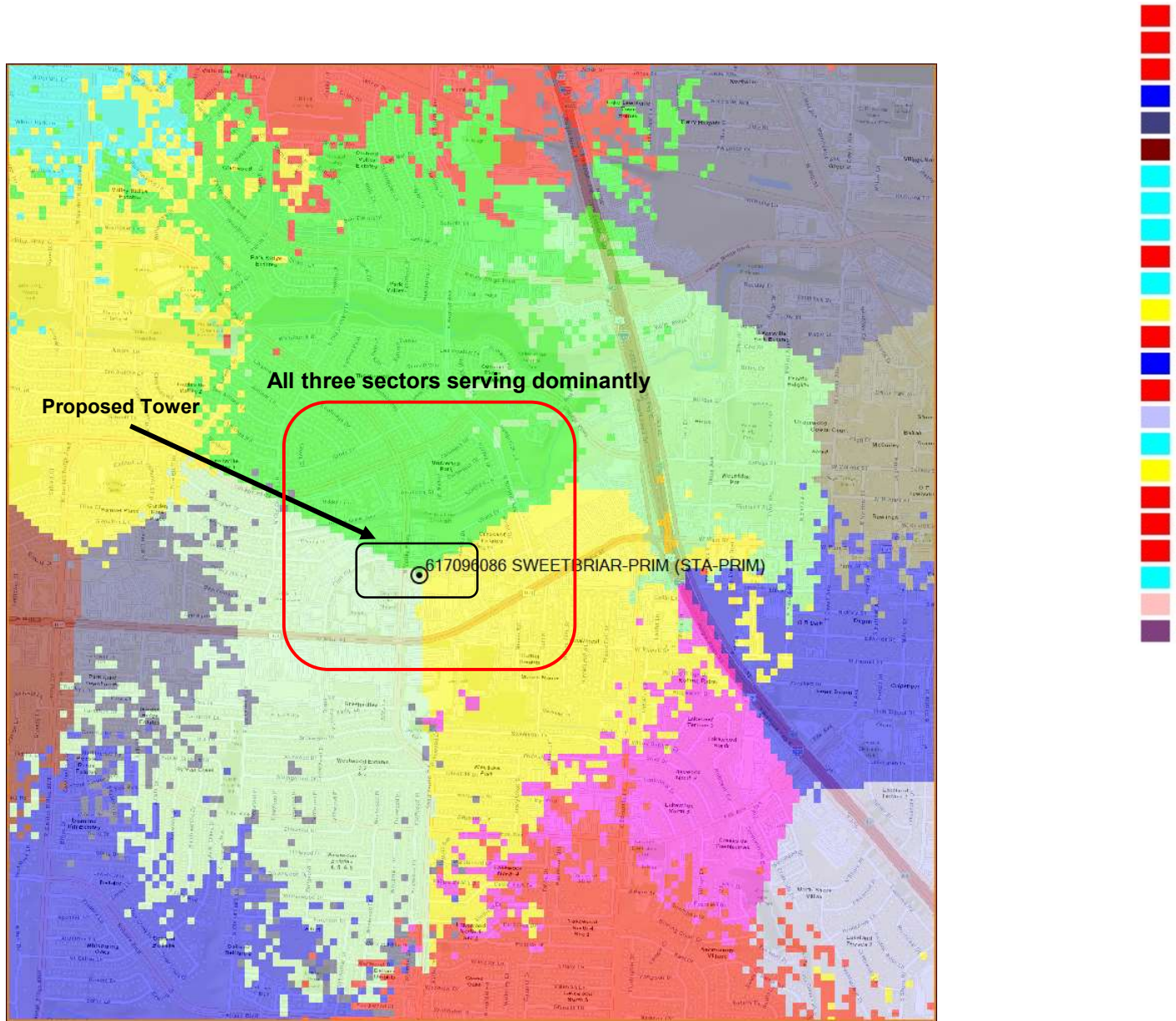
Note: RSRP plots in slides 3-10 are generated Using Forsk's Atoll tool.



Serving Sector Maps: Before without Proposed site



Serving Sector Maps: Best Server with Proposed site



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Thank You



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