

Alternative Candidate Analysis

**Verizon Wireless
LB Courthouse
475 Magnolia Avenue
Long Beach, CA 90802**



**9/6/18
Summary of Site Evaluations
Conducted by: Delta Groups Engineering**

I. Summary

In March of 2015, it became necessary for Verizon Wireless to pursue a new wireless facility in the Courthouse area of the city of Long Beach. Due to heavy demand for wireless voice and data, along with increased usage, the community and Verizon Wireless subscribers require a greater coverage area and capacity to accommodate their needs. The significant gap in coverage/capacity created in the Courthouse area of Long Beach is currently being served by the "LB CONV CTR" site. The significant gap in coverage/capacity includes the Courthouse and the residences and other commercial businesses in the area. Based on an extensive, comprehensive and thorough review of available sites, Verizon Wireless has concluded that the "LB Courthouse" rooftop installation constitutes the least intrusive alternative to help fill the identified significant gap in coverage/capacity based on the guidelines set forth in the Long Beach Municipal Code (the "Code"). This site is a "targeted" site meaning that the RF engineers have specified this building as the only location feasible for the site. It is the only feasible site which meets the code requirements of the Code while also meeting the coverage and capacity needs of the citizens and emergency service providers of the Courthouse area of the city of Long Beach.

II. Coverage/Capacity Gap

Verizon Wireless Performance Engineers have determined that there is a significant gap in coverage and capacity in the Courthouse area of the city of Long Beach. The gap centers on the courthouse and extends to surrounding areas (the "Coverage/Capacity Gap") and reflects insufficient capacity within the existing network to meet service demands in the vicinity of the site. The objective for the site is to offload existing site "LB CONC CTR". The site will also improve coverage in the surrounding commercial area as well as the few residential buildings. For this area, the "LB Courthouse" site will significantly improve the gap in service coverage by providing sufficient capacity for all calls and data routing through the cell sites in the area and ensuring reliability of cellular signal in the area.

III. Methodology

Once a significant coverage/capacity gap is determined, Verizon Wireless seeks to identify a site that will provide a solution through the "least intrusive means" based upon Verizon Wireless' experience with designing similar facilities and working within local regulations. In addition to seeking the "least intrusive" alternative sites any site proposed by Verizon Wireless must be feasible. In this regard, Verizon Wireless reviews the topography, radio frequency propagation, elevation, height, available electrical and telephone utilities, access, and other critical factors such as a willing landlord in completing its site analysis. Wherever feasible, Verizon Wireless seeks to identify collocation opportunities that allow placement of wireless facilities with minimal impacts. There was no collocation for this site that met RF needs. In order to insure the most compatibility this site has been designed to be located on the rooftop therefore eliminating the need for a new stand-alone structure.

IV. Analysis

For the last 3 years, Verizon Wireless has sought to identify a suitable location for its wireless facility to serve the Courthouse area of Long Beach. The search ring area is in the courthouse, that is fully developed with a majority of commercial uses. As collocation of facilities is generally required where available under the city of Los Angeles Municipal Code Verizon Wireless sought collocation sites which could provide radio frequency propagation to the Coverage/Capacity Gap; no such collocation sites were found.

Alternatives

This site was targeted by RF as it is the courthouse and immediate surrounding commercial sites that are in need of more reliable coverage.

Co-Location Information

Verizon Wireless always pursues co-location opportunities as a priority. If any potential existing facilities are identified, Verizon Wireless will contact the existing carrier to pursue co-location opportunities. There were no viable existing wireless facilities within the search ring area.

The preferred candidate is 275 Magnolia Avenue, located on the existing rooftop of the Courthouse. The roof top is the least intrusive design, it would encourage co-location, and would provide coverage to an area that has poor coverage and would assist nearby facilities in offloading.

