State of Florida
Telecommunications Site Review
Upgrade Version

CityScape Consultants, Inc.
7050 West Palmetto Park Road #15-652
Boca Raton, FL 33433
Tel: 877-438-2851 · Fax:877.220-4593

September 18, 2014

Mr. Scott Stoudenmire, Deputy Director
Department of Sustainable Development
City of Coconut Creek
4800 West Copans Road
Coconut Creek, Florida 33063

RE: Verizon #68450 "Coconut Creek Government Center"
4800 West Copans Road

Dear Mr. Stoudenmire,

At your request, on behalf of the City of Coconut Creek, Florida ("City"), CityScape Consultants, Inc. ("CityScape"), in its capacity as telecommunications consultant for the City, has considered the merits of an application submitted by Verizon Wireless ("Applicant") to make certain modifications and adjustments to their wireless system on an existing one hundred twenty-five (125) foot monopole-type support structure, see *figure 1*. The site is owned by the City of Coconut Creek and located at 4800 West Copans Road in Coconut Creek, Florida; see *figure 2*.

Verizon is in the process of modifying their equipment for advancing technologies for fourth generation (4G) capability, which is in the final launch stages throughout South Florida. Verizon will be utilizing new spectrum in the 700 MHz band for the new technologies commonly referenced as LTE (Long Term Evolution). Coconut Creek has experienced numerous applications for upgrades to 4G over the past year from all of the carriers that currently operate in Broward County. These antenna modification plans are known as LTE or AWS (Advanced Wireless Services) which operates in the 2100 to 2500 MHz frequency range.

There are two considerations for the proposed modification and upgrade request. First, under Section 2.02 of the Applicant's existing Lease Agreement dated May 13, 2004 with the City, the Applicant has the authority to make the proposed changes with written approval from the City. Secondly the changes must meet certain requirements of the City's Ordinance, including structural compatibility and compliance with state and federal regulations.

The Applicant is proposing to replace three (3) existing second generation (2G) CDMA (Code Division Multiple Access) panel antennas which are normally used for voice/text only, with upgraded 4G versions for improved LTE operation, in addition Verizon will reuse the three (3) existing LTE antennas. Verizon will maintain six (6) total number of antennas as provided for in the Applicant's lease and no further modifications will be required at this time; see *figure 3*. Additionally, Verizon will install new service to support its electronic base station equipment. All base station equipment modifications will be contained within the Applicant's existing ground lease area; see *figure 4*. All designs and plans for the Applicant's proposed upgrades were developed according to accepted practices of Radio Frequency (RF) propagation engineering and the persons completing all work are sufficiently qualified within their respective disciplines.

CityScape is aware that the Applicant's proposed facility will operate in the 700 MHz, 800 MHz and 1850 MHz spectrum and therefore could be an interference concern to public safety operations. The Applicant has submitted an updated statement of compliance with all Federal Communications Commission (FCC) standards regarding human exposure to RF energy and rules regarding interference with other telecommunications services; see *figure 5*. It is expected that in the near future Verizon will add new AWS facilities operating in the 2100 MHz to 2500 MHz frequency range.

Previously, CityScape calculated the proposed changes were effectively an even loading swap of antennas and determined to be satisfactory. The Applicant has provided an updated Modification Analysis Report dated September 2, 2014 using the 222-G standard. The tower was previously designed and constructed using the previous "F" standard. The new tower rating is anticipated to be 96.6% out of a maximum allowed of 105%; see *figure 6*. Additional upcoming modifications will require a new analysis and possibly some tower upgrades to the structure.

CityScape has visited the site on numerous occasions and has determined all necessary requirements for the proposed modifications can be accommodated within the property limits. The site has been designed and constructed by professionals with expertise in telecommunications site design and the construction drawings submitted on behalf of the Applicant confirms a continuation of that practice of the expertise in the discipline of maximizing the use of telecommunications facilities. This practice corresponds with the desires of the City of Coconut Creek.

Based upon the Applicant's submitted documentation, CityScape confirms the application is qualified under the federal Middle Class Tax Relief and Job Creation Act of 2012 and therefore, recommends approval with the following conditions.

1. All feed lines shall be installed inside the monopole shaft; and,
2. All feed line access ports shall be sealed in a manner to prevent access by birds and other wildlife.

Respectfully submitted**,**

Richard L. Edwards
FCC Licensed
PCIA Certified
CityScape Consultants, Inc.

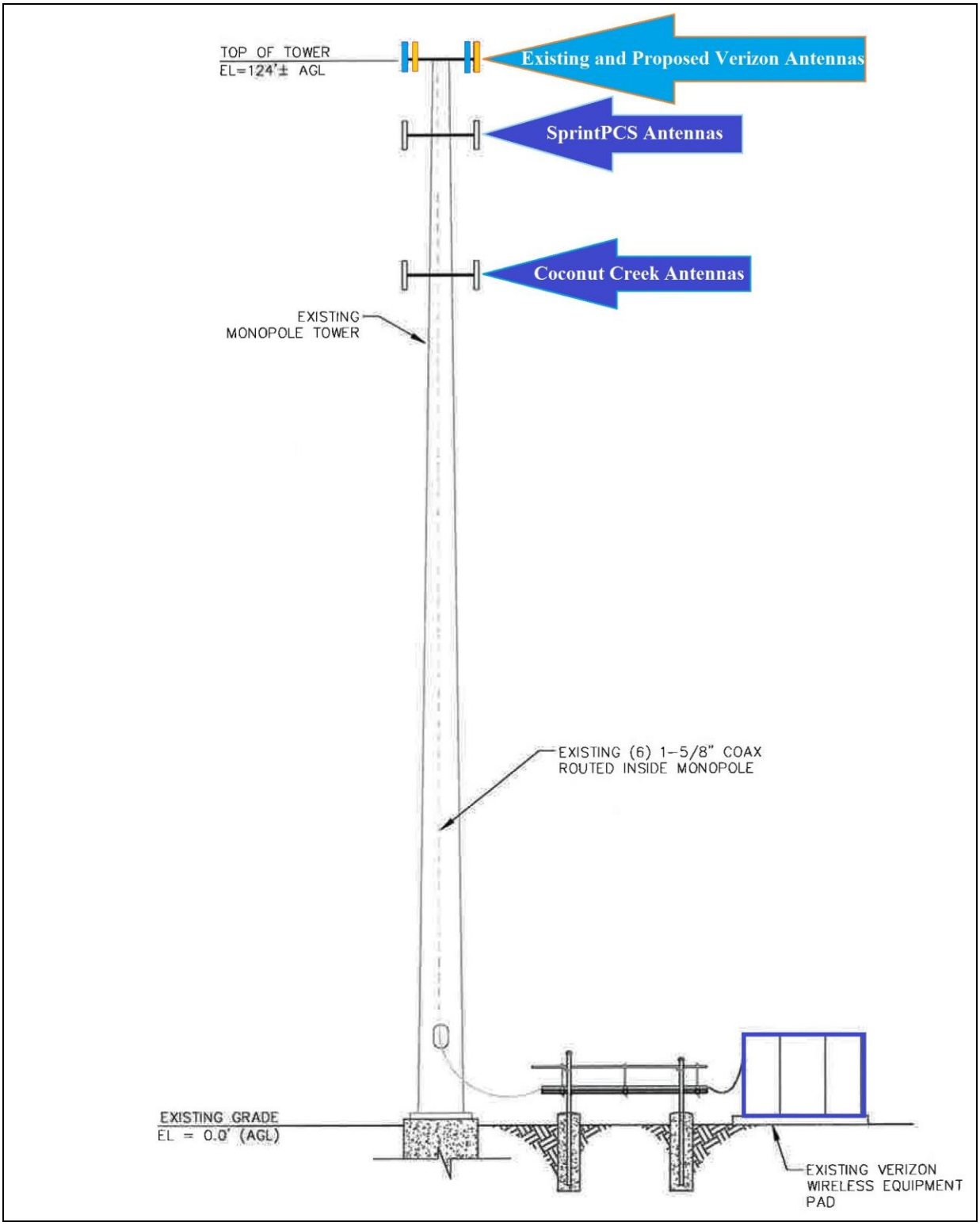

Figure 1. Tower Elevation

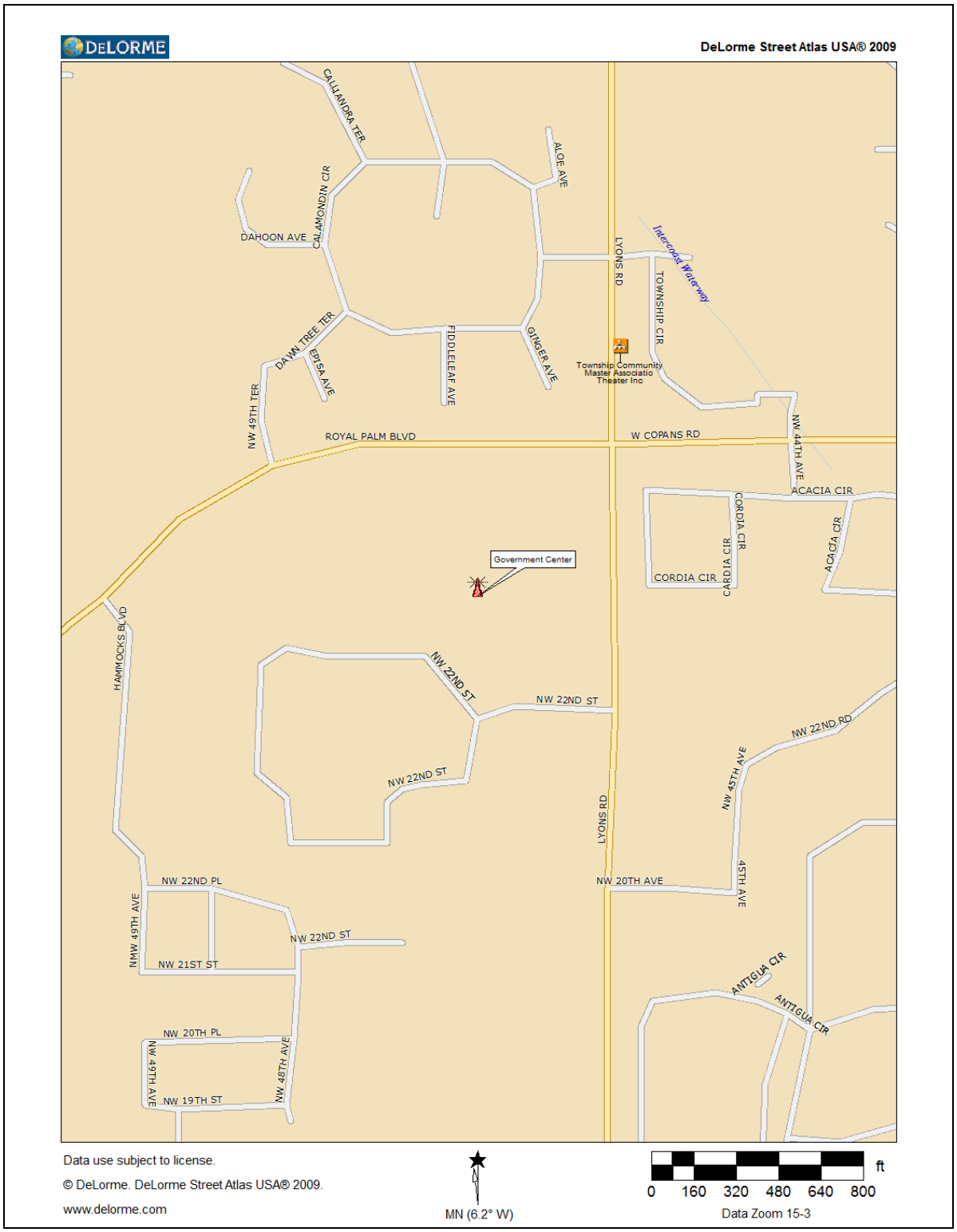

Figure 2. Site Location

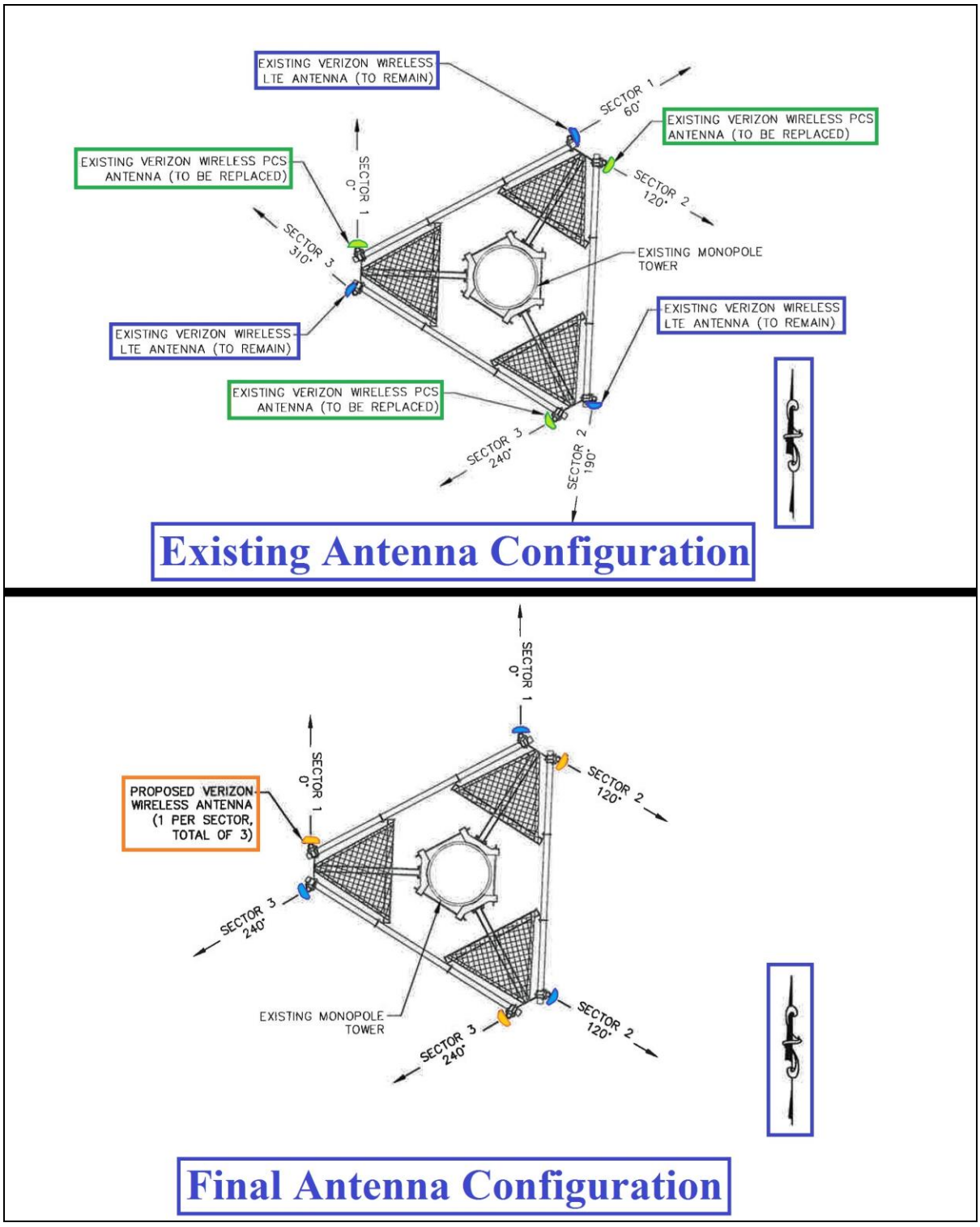

Figure 3. Antenna Configuration

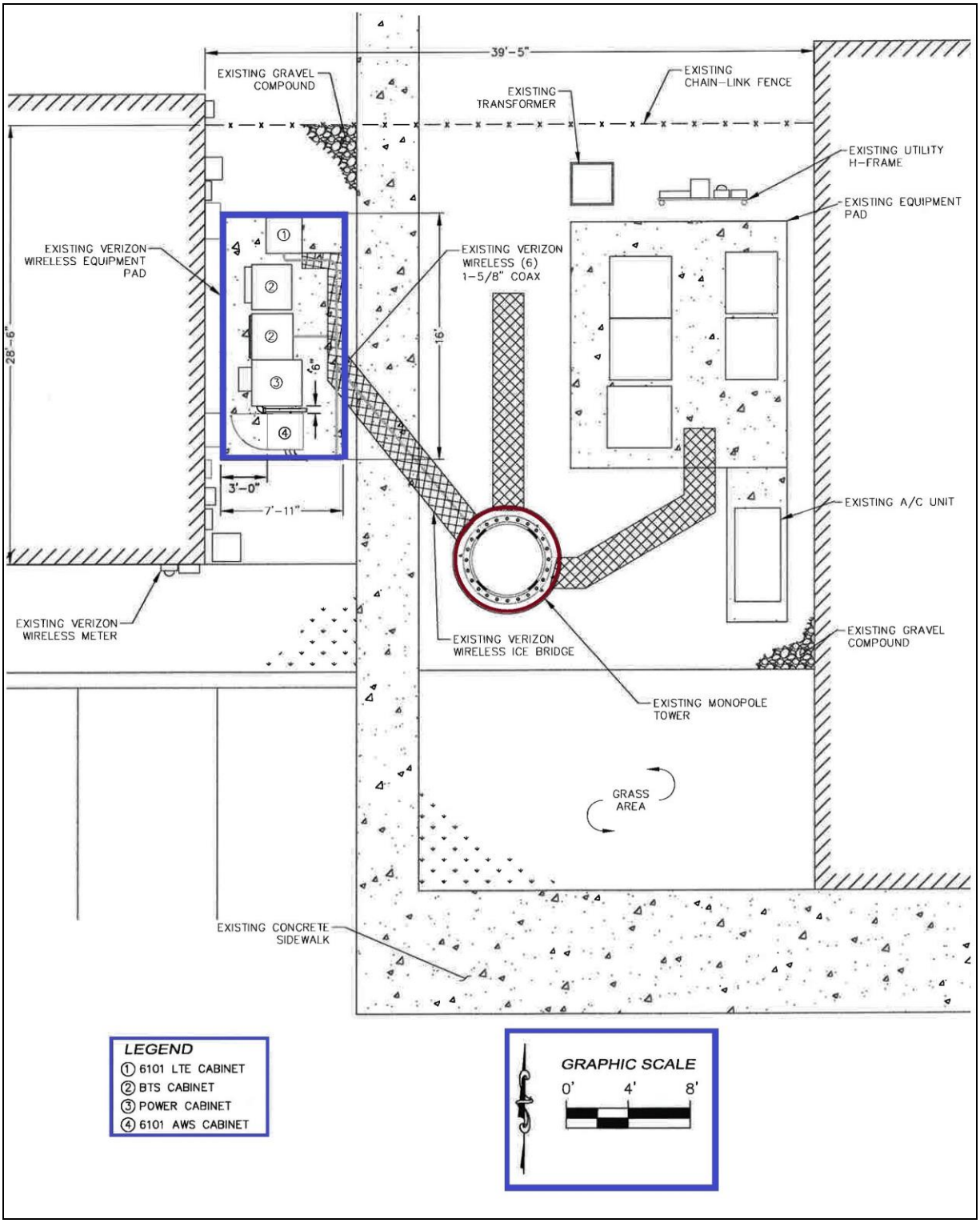

Figure 4. Ground Compound

September 16th, 2014

City of Coconut Creek

RE: FCC Compliance- Verizon Wireless Site ID 68450
Project Name – Coconut Creek Government Center
Address: 4800 W Copans Road, Pompano Beach FL 33063

To Whom It May Concern:

Verizon Wireless and/or affiliates ("Verizon Wireless") operate a PCS / LTE / AWS Network authorized by the Federal Communications Commission (FCC) to provide state of the art digital wireless communications in many parts of the nation, including Florida. Verizon Wireless' operations and network are licensed and regulated by the FCC.

In an effort to provide seamless coverage and improve phone service, Verizon Wireless is proposing a collocation of its wireless communications facility at the above referenced location.

Verizon Wireless herby certifies that the proposed installation at the above referenced address will not cause interference with the use of properly functioning radios, televisions, Emergency Management Systems (EMS) and or telephone broadcasting and reception. In addition, Verizon Wireless shall certify that the antennas installed will be in compliance with all present and future promulgated safety laws, rules and regulations concerning electromagnetic emissions standards or similar safety standards for other communications transmissions.

The RF design, as proposed for the above noted site, is in compliance with all applicable FCC requirements. In addition, the proposed Verizon Wireless installation meets all applicable ANSI/IEEE C95.1-1992 exposure levels, as adopted by the FCC requirements.

Sincerely,

Maria Dubon-Gimenez
Senior RF Design Engineer - Verizon Wireless

Figure 5. Compliance with FCC rules

SBA

MORRISON HERSHFIELD

Ms. Laura Roberts
SBA Communication Corporation
5900 Broken Sound Parkway NW
Boca Raton, FL 33487
(561) 226-9452

Morrison Hershfield Corporation
1455 Lincoln Parkway, Suite 500
Atlanta, GA 30346
(770) 379-8500

Date: September 2, 2014

Subject: **Rigorous Modification Analysis Report**

Site ID: RFT1966-A
Site Name: COCONUT CREEK1180

Carrier: Verizon Wireless
Carrier Site Name: COCONUT CREEK GOVT CTR

Site Address: 4800 Copans Road, Coconut Creek, FL 33063
Site Coordinates: Latitude: 26° 15' 29.5" N, Longitude: 80° 11' 15.75" W
Tower Description: 124 ft – Monopole Tower

Morrison Hershfield Project Number: SBA-157R3 / 7140036

Dear Ms. Roberts,

Morrison Hershfield Corporation has carried out a modification analysis of the above referenced structure for the existing and proposed antenna and equipment noted in Table 2. This rigorous modification analysis has been performed in accordance with the 2010 Florida Building Code based upon an ultimate 3-second gust wind speed of 170 mph converted to a nominal 3-second gust wind speed of 132 mph per section 1609.3.1 as required for use in the TIA-222-G Standard per Exception #5 of Section 1609.1.1. This analysis is subject to the assumptions noted.

Our analysis demonstrates that the existing tower and foundation **ARE in conformance (tower at 96.6% and foundation at 73.0%)** with the requirements of the above noted standards under the effects of loading described.

We at Morrison Hershfield Corporation appreciate the opportunity of providing our continuing professional services to you and SBA Communication Corporation. If you have any questions or need further assistance on this or any other projects please give us a call.

Sincerely,
Morrison Hershfield Corporation

The new Tower Rating will be 96.6%, but there are upcoming additions and collocations

G. LANCE COOKE LICENSE No 68787 STATE OF FLORIDA PROFESSIONAL ENGINEER

G. Lance Cooke, P.E. (FL License No. 68787)
Senior Engineer

Certificate of Authorization # 8508

Morrison Hershfield

Figure 6. Structural Statement

Exhibit A. Subject Facility