City of Coconut Creek

Telecommunications Site Review
Equipment Upgrade Application

CityScape CONSULTANTS, INC.
7050 W. Palmetto Park Road #15-652
Boca Raton, FL 33433-3483
Tel: 877.438.2851 Fax: 877.220.4593

June 8, 2017

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

RE: Coconut Creek
AT&T Mobility / FL01

Dear Mr. Stoudenmire,

At your request, on behalf of the City of Coconut Creek ("City"), CityScape Consultants, Inc. ("CityScape") in its capacity as telecommunications consultant for the City, has considered the merits of the above referenced application submitted by Crown Castle on behalf of AT&T Mobility ("Applicant") to upgrade equipment on an existing one hundred ninety-two (192) foot *lattice* tower. The tower is owned by Crown Castle International and is located at 3601 Vinkemulder Road, Coconut Creek, Florida, *see Figure 1*.

Support Structure & Equipment

The purpose of the proposal is to allow the AT&T to install new equipment for improved 4G LTE service. This will support higher speed wireless broadband. These modifications to the tower equipment will occur at the one hundred one (101) foot level, *see Appendix, Exhibit A.* The Applicant currently maintains nine (9) panel antennas, nine (9) RRUs, three (3) surge suppressors and three (3) equipment boxes. The Applicant is replacing these three equipment boxes with additional RRUs. The new antenna configuration is depicted in *Appendix, Exhibit B.*

The Applicant previously submitted appropriate letters of compliance with all Federal Communications Commission (FCC) guidelines regarding Radio Frequency (RF) energy and exposure limits and RF interference with other radio services in a letter dated November 19, 2012.

Structural Analysis

The Applicant provided a new structural analysis, prepared by GPD Group, dated November 4, 2016. The report indicates that the structure was calculated using ANSI/TIA-222-G and the "C" exposure category. For the structure to comply, the empty mounts at 144 feet and 170

feet must be removed and the twelve (12) 7/8" coaxial feed lines shall be installed in three rows of four, as shown in *Appendix, Exhibit C.* If the coaxial feed lines are already installed in a different configuration, they shall be modified to match this configuration. The final configuration will have a new stress rating of 86.6% (foundation) and 104.1% (tower), just under the maximum allowed of 105%, see *Appendix, Exhibit D.*

Under the Middle Class Tax Relief and Job Creation Act of 2012 ("The Act") any personal wireless facility collocation, modification or upgrade may qualify for streamlined processing. Furthermore, under Section 6409(a) it can qualify for administrative approval if the request meets six criteria, most notably (1) it does not increase the structure height by 10% or 20 feet, whichever is greater, (2) it does not increase the structure width by 20 feet and (3) it does not require any excavation outside the existing ground compound. Section 6409(a) further states that if an application meets the criteria, the application should be approved and not denied. CityScape has determined this application complies with the Act and should be approved.

The submitted application conforms to the requirements of City codes and State of Florida wind codes and structural integrity. Therefore, it is CityScape's recommendation that the City ***approve*** the application with the following condition:

Applicant shall comply with the recommendations shown in 4.1 of the structural analysis, specifically:

1) The empty mounts located at 144 feet and 170 feet are to be removed

2) The (12) 7/8" coaxial feed lines are to be stacked in 3 rows of 4, as shown in Appendix B of the structural report. If these feeds lines are already installed, the Applicant can either reconfigure them or provide a new structural analysis indicating that the existing configuration will not exceed the maximum loading.

I certify that to the best of my knowledge all the information included herein is accurate at the time of this report. CityScape only consults for public entities and has unbiased opinions. All recommendations are based on technical merits without prejudice per prevailing laws and codes.

Respectfully submitted,

Jonathan N. Edwards, P.E.
CityScape Consultants, Inc.

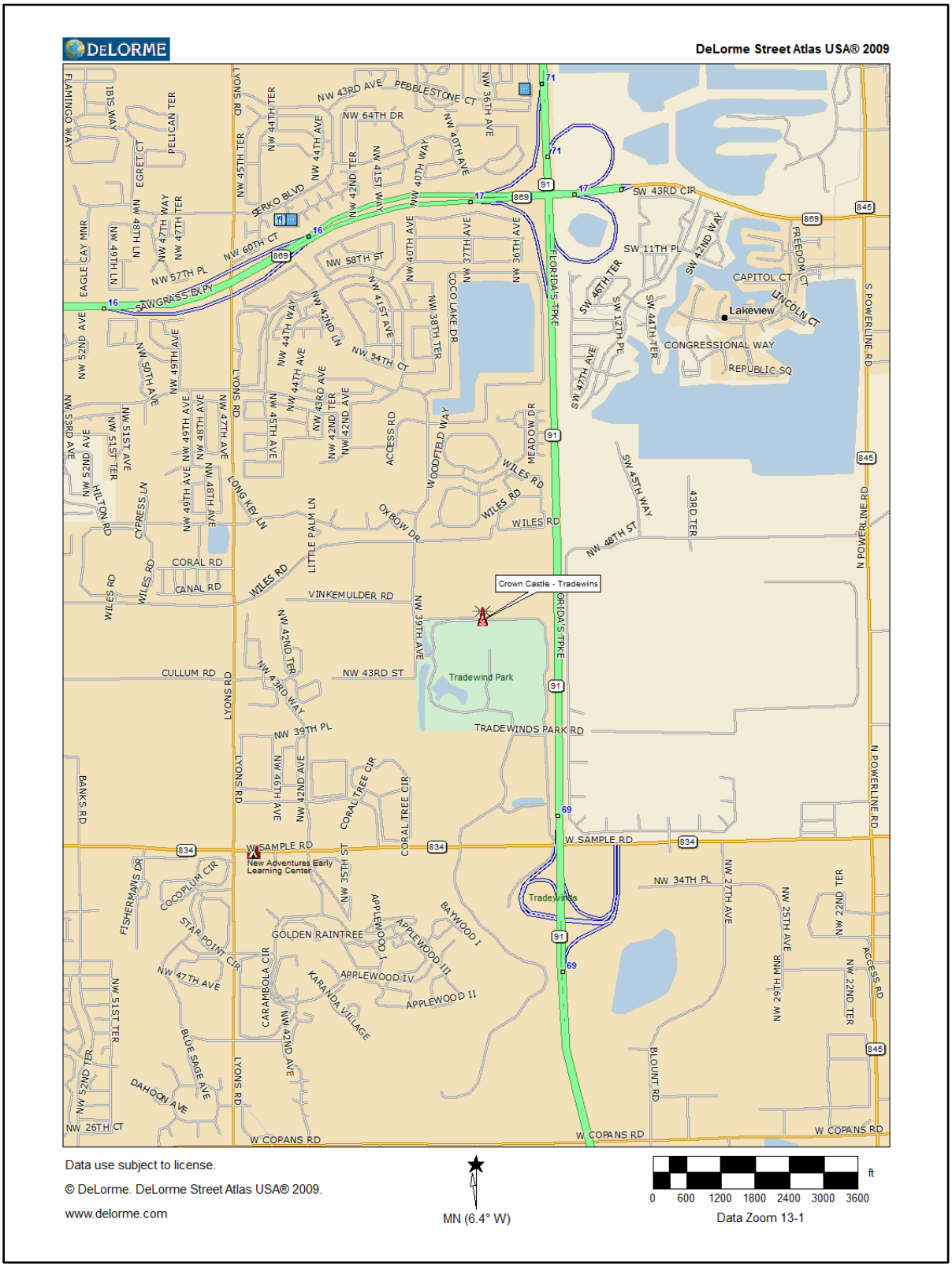

Figure 1 – Site Location

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Appendix

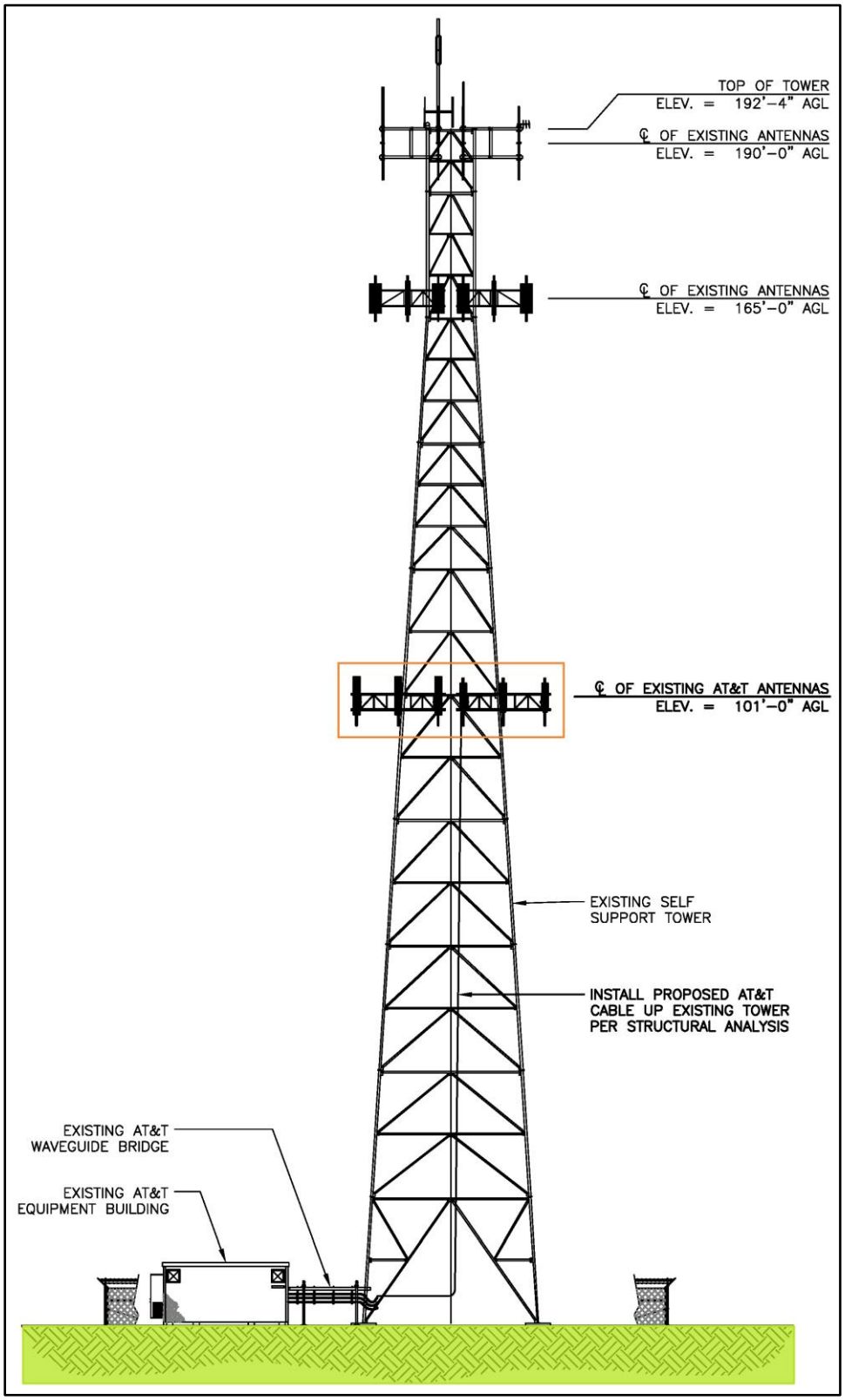

Exhibit A - Existing Support Structure

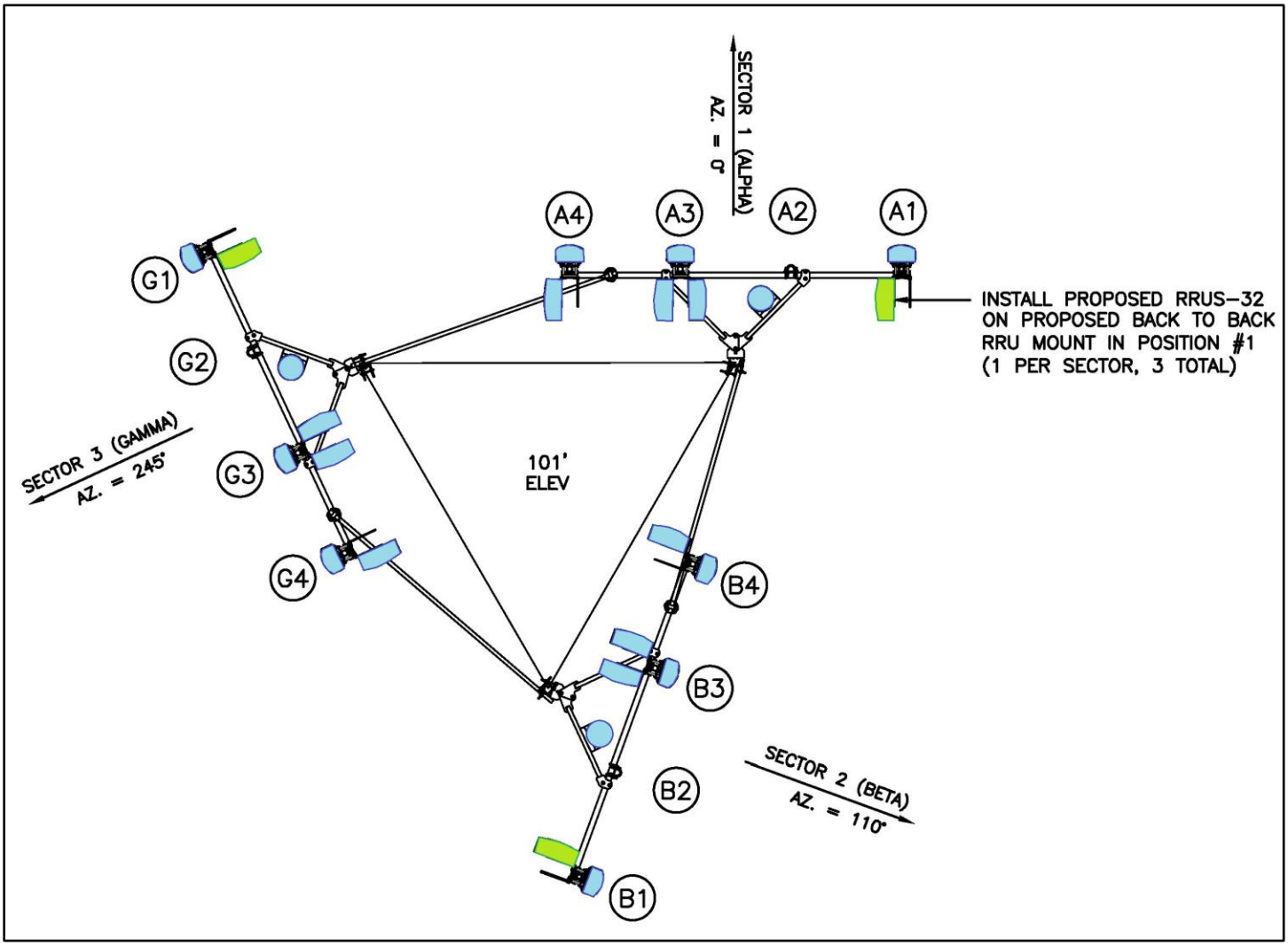

Exhibit B – Proposed Equipment Configuration

Color Legend
Existing Equipment
Replaced Equipment

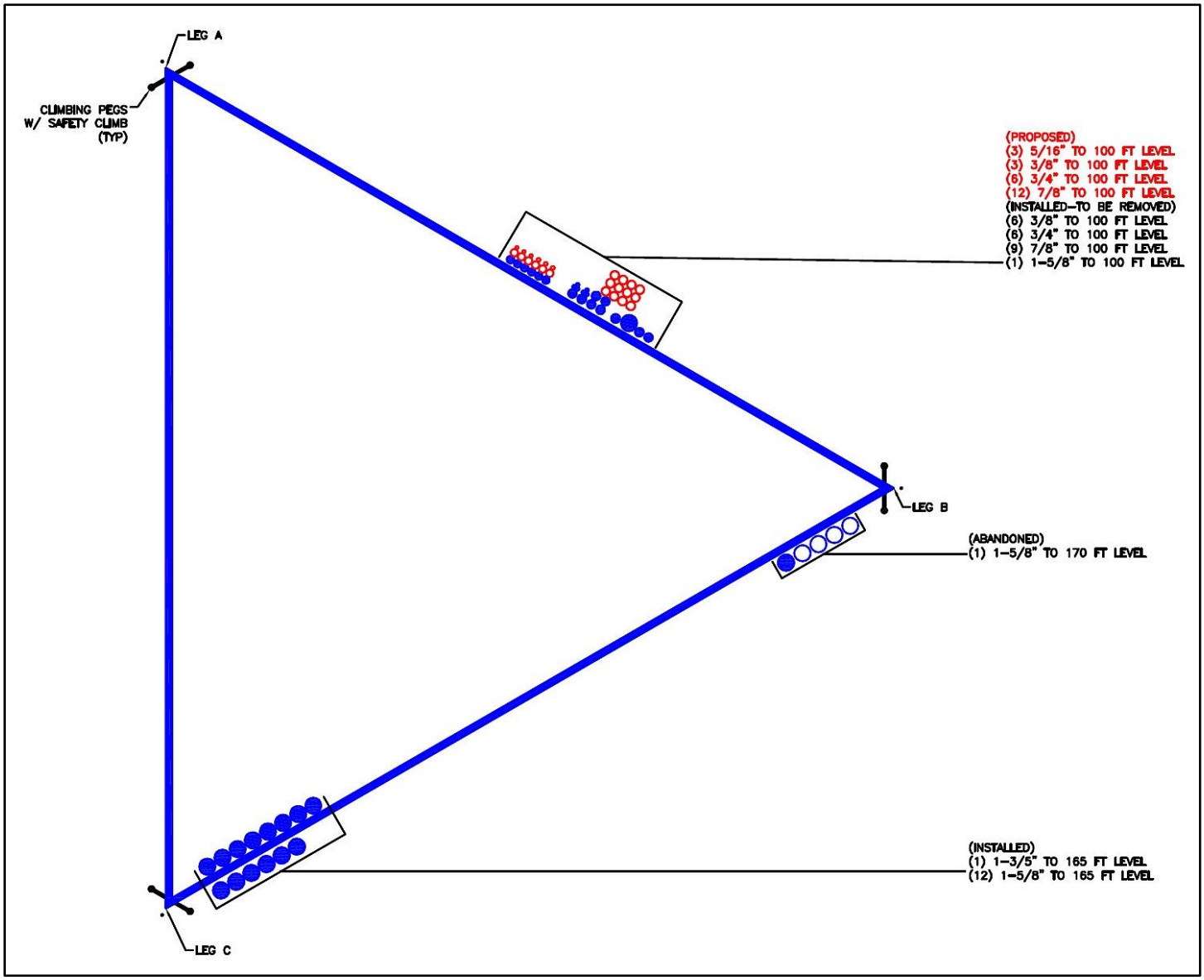

Exhibit C – Coaxial Configuration

CityScape CONSULTANTS, INC.

Date: **November 4, 2016**

Ryan Shaffer
Crown Castle
12725 Morris Road Extension Suite 400
Alpharetta, GA 30004
(678) 366-1273

GPD GROUP, INC.
520 South Main Street Suite 2531
Akron, Ohio 44311
(216) 927-8663
dpalkovic@gpdgroup.com

Subject:	**Structural Analysis Report**	
Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Carrier Site Number:	10070109
	Carrier Site Name:	FL01
Crown Castle Designation:	**Crown Castle BU Number:**	842800
	Crown Castle Site Name:	FL01
	Crown Castle JDE Job Number:	393421
	Crown Castle Work Order Number:	1322369
	Crown Castle Application Number:	359269 Rev. 1
Engineering Firm Designation:	**GPD Project Number:**	2017777.842800.10
Site Data:	**3601 Vinkemulder Road, Coconut Creek, Broward County, FL 33073**	
	Latitude *26° 17' 7.11"*, Longitude *-80° 10' 22.04"*	
	192.333 Foot - Modified Self Support Tower	

Dear Ryan Shaffer,

We are pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 967111, in accordance with application 359269, revision 1.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC5: Existing + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

This structure has sufficient capacity once the loading changes described in the Recommendations section of this report are completed.

This analysis has been performed in accordance with the 2014 Florida Building Code, 5th Edition, based on an ultimate 3-second gust wind speed of 170 mph per Section 1620.2, as required by the Exception of Section 1601.1. Exposure Category C and Risk Category II were used in this analysis.

We appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects please give us a call.

Structural analysis prepared by: Eric Schnaus

Respectfully submitted by:

CHRISTOPHER J. SCHEKS LICENSE NO. 78737 STATE OF FLORIDA PROFESSIONAL ENGINEER

Christopher J. Scheks, P.E.
Florida #: 78737

11/4/16

Exhibit D – Structural Analysis