

DEVELOPMENT REVIEW

Property address or Location 2006 ORANGE AVENUE
Parcel ID #(s) 2409-605-0008-000-4
Project description New Communication tower w/ compound

Lesley Phillips / Abdel Jebbar Elbakkari RG Towers, LLC

Property Owner(s)
2006 Orange Ave
Street Address
Ft Pierce FL 34950
City State Zip
772-595-8129

Phone Number
amal0012012@gmail.com
Email Address

Applicant/Representative, Title, Company
2141 Alternate A1AS Ste 440
Street Address
Jupiter, FL 33477
City State Zip
561-748-0302

Phone Number
hvaldez@rgpartners.com
Email Address

Property Owner(s) Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.

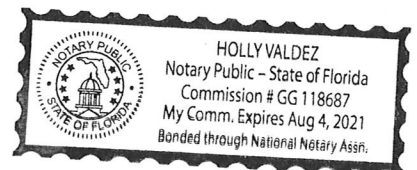
[Signature] Lesley Phillips
Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY

The foregoing instrument was acknowledged before me this 21 day of Nov., 2017, by Lesley Phillips / Abdel Elbakkari who is personally known to me or has produced _____ as identification.

[Signature]
Signature of Notary

(seal)



INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

| Zoning | Future Land Use | Total Acres | Historic District | Historic Designation |
|--------|-----------------|-------------|-------------------|--|
| | | | | Contributing Individual Non-Contributing None |

Pre-Application Meeting Date _____ Fees _____ Control # _____ B. Permit # _____

Intake Planner _____

Planner Assigned _____

Approved By _____ Date _____

Comments _____

Intake Date Stamp



DEVELOPMENT REVIEW

General Information

- Incomplete application packets cannot be accepted.
- Site Plan approval is valid for one (1) year following City Commission approval. In order to maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date, and building permits must be maintained until site plan is completed, per plans, or approval shall lapse.

Choose Application Type:

| Application Type | | | |
|--|--|--|--|
| <input checked="" type="checkbox"/> Site Plan | <input type="checkbox"/> Conditional Use with New Const. | <input type="checkbox"/> Major Amendment | |
| <input type="checkbox"/> Conceptual Development Plan | | <input type="checkbox"/> Minor Amendment | |

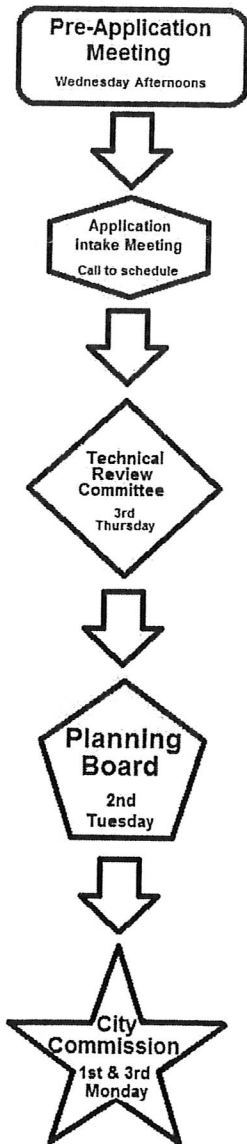
Site Information:

Non-Residential: Proposed Sq. Ft.: 2000 Residential: Proposed Units: 0

Surrounding Uses: (i.e. single family home, retail, industrial, etc.)

| North | South | East | West |
|-------|-------|------|------|
| R3 | C3 | C3 | C3 |

Application Outlook



Site Plan submittal requirements:

Submit one (1) original & thirteen (13) hard copies and one (1) CD of the following. Additional copies will be required of subsequent submittals.

- Complete notarized application
- Warranty Deed
- SLC Property Record Card
- Statements of ownership & control of proposed development. Statement describing in detail: character & intended use.
- General location map (see Section 22-58.d.2)
- Survey (see Section 22-58.d.3)
- Site Plan (see Section 22-58.d.4)
- Landscaping Plan (see Section 22-187)
- Storm Drainage Plan (see Section 22-58.d.6)
- Environmental Impact Report
- Beach/Dune System protection plan, if applicable (see Section 22-58.d.7)
- Lighting Plan (see Section 22-58.d.8)
- Design Review submittals (see Design Review application) **NA**
- Traffic Impact Report **NA**
- Concurrency Review submittals (see Concurrency Review application) **NA**



Design Review

Property address or Location 2006 Orange Ave
Parcel ID #(s) 2409-6005-0008-000-4
Project Description New Communication tower w/ compound

Abdel Jebbar Elbakkari ^{Lestrey Phillips}
Property Owner(s)
2006 Orange Ave.
Street Address
Ft Pierce FL 34950
City State Zip
772-595-8129
Phone Number
amal0012012@gmail.com
Email Address

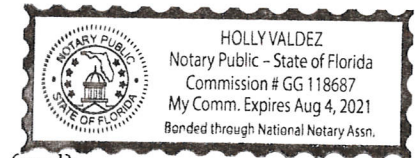
RG Towers, LLC
Applicant/Representative, Title, Company
2141 Alt. A1AS. Ste 440
Street Address
Jupiter FL 33477
City State Zip
561-748-0302
Phone Number
hvaldez@rgpartners.com
Email Address

Property Owner(s) Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Application (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein.

[Signature]
Property Owner(s) Signature(s)

STATE OF FLORIDA -- COUNTY
The foregoing instrument was acknowledged before me this 12 day of Dec., 2017, by
Abdel Elbakkari
Lestrey Phillips who is personally known to me or has produced
_____ as identification.

Holly Valdez
Signature of Notary

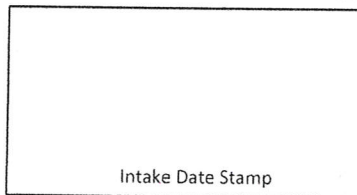


(seal)

TO BE COMPLETED BY STAFF

| Zoning | Future Land Use | Total Acres | Historic Districts | Historic Designation |
|--------|-----------------|-------------|--------------------|----------------------|
| | | | | |

Pre-Application Meeting Date _____ Fees _____ Control # _____ B. Permit _____
Intake Planner _____
Planner Assigned _____
Approved _____ Date _____
Comments _____





10/20/17

RE: Zoning Review Section 22-159-B 7
Letter of intent. RG Towers Ft Pierce Orange Ave TC11

Dear Sir/ Madam:

RG Towers, LLC is applying for approvals to build a 150' communications tower, which will be available for collocation in St Lucie County. The following information is provided pursuant to the requirements of the City of Fort Pierce Land Development Regulations Section 22-159 and notices have been provided to all major carriers.

-

| | |
|-----------------------------|--|
| Tower Height/Type | 150' Monopole |
| Address | 2006 Orange Ave, Fort Pierce, FL 34950 |
| Coordinates | Approximately 27.447636, -80.345960 |
| General Rate | Dependent upon height, loading and ground space required |
| Tentative Construction date | Q2, 2018 |

RG Towers, LLC and its successors will agree to the shared use of the tower if an additional user agrees, in writing, to meet reasonable terms and conditions for shared use

.

Sincerely,

Scott Richards
CEO
RG Towers, LLC



RG Towers, LLC

10/31/17

RE: RG Towers-Ft Pierce- Orange Ave Relevant Easements

Per the requirement of code Section 22-159 (b) 6 "Copies of Relevant Easements", we report that there are no relevant easements to this application per the title report dated 10/18/17.

- US TITLE SOLUTIONS FILE NO.58394-FL1710-5030
REFERENCE NO. TC11 SITE NAME Ft Pierce- Orange Ave

Sincerely,

Holly Valdez
V.P. Operations
RG Towers, LLC

TOWAIR Determination Results

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 7049.71 MTRS (7.04969 KM) AWAY

| Type | C/R | Latitude | Longitude | Name | Address | Lowest Elevation (m) | Runway Length (m) |
|------|-----|--------------|---------------|---------------------|--------------------------|----------------------|-------------------|
| AIRP | R | 27-30-15.00N | 080-22-43.00W | TREASURE COAST INTL | ST LUCIE FORT PIERCE, FL | 6.4 | 1978.8 |

PASS SLOPE(100:1)NO FAA REQ - 5625.0 Meters (18454.5 Feet) away & below slope by 11.0 Meters (36.0900 Feet)

| Type | C/R | Latitude | Longitude | Name | Address | Lowest Elevation (m) | Runway Length (m) |
|------|-----|--------------|---------------|---------------------|--------------------------|----------------------|-------------------|
| AIRP | R | 27-29-49.00N | 080-21-34.00W | TREASURE COAST INTL | ST LUCIE FORT PIERCE, FL | 6.4 | 1978.8 |

**PASS SLOPE(100:1)NO FAA REQ - 4655.0 Meters (15272.1 Feet)
away & below slope by 1.0 Meters (3.27999 Feet)**

| Type | C/R | Latitude | Longitude | Name | Address | Lowest Elevation (m) | Runway Length (m) |
|------|-----|--------------|---------------|---------------------|--------------------------|----------------------|-------------------|
| AIRP | R | 27-29-14.00N | 080-21-42.00W | TREASURE COAST INTL | ST LUCIE FORT PIERCE, FL | 6.4 | 1978.8 |

Your Specifications

NAD83 Coordinates

| | |
|-----------|------------------|
| Latitude | 27-26-51.5 north |
| Longitude | 080-20-45.1 west |

Measurements (Meters)

| | |
|--------------------------------|------|
| Overall Structure Height (AGL) | 45.7 |
| Support Structure Height (AGL) | 45.7 |
| Site Elevation (AMSL) | 6 |

Structure Type

MTOWER - Monopole

[Tower Construction Notifications](#)

Notify Tribes and Historic Preservation Officers of your plans to build a tower.

[CLOSE WINDOW](#)

WSP Consultants, Inc.

Surveyors & Mappers

18815 Annelis Drive
Lutz, FL 33548
Phone: (813) 909-2420

F.A.A. 1A LETTER

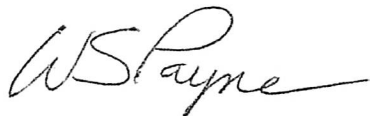
Date: October 16, 2017
For: RG TOWERS, LLC
Site: ORANGE AVENUE
2006 Orange Avenue, Fort Pierce, FL 34950
St. Lucie County, Florida

I certify that the Latitude 27°26'51.584" N and the Longitude of 080°20'45.150" W of the above referenced site is accurate to within ± 15.0 feet horizontally and that the site elevation of 19.8' (NAVD 88) is accurate to within ± 3.0 feet vertically.

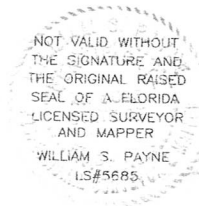
The Latitude and Longitude as identified hereon are referenced to the North American Datum of 1983/2011 (NAD 83/2011) and are expressed as degrees, minutes and seconds. The elevations shown hereon in feet are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Note:

The Latitude, Longitude & Elevation were obtained at the Proposed Tower Location.



William S. Payne
Professional Surveyor and Mapper No. 5685
WSP Consultants, Inc. – LB No. 7188
State of Florida



SEAL

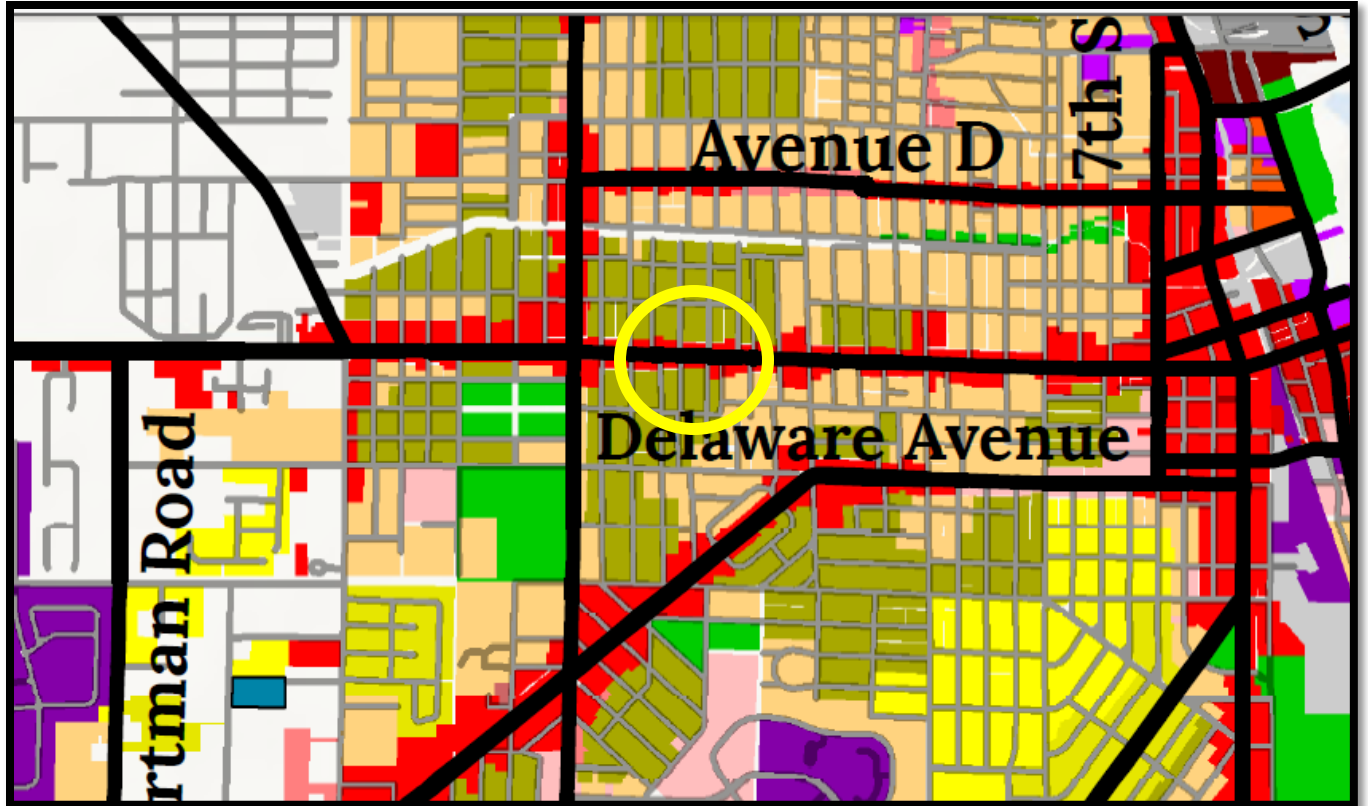


Section 22- 58.d.2

(2)


A general location map which shows the approximate location of streets, street signals and vehicular access points to streets along streets abutting the proposed development, rights-of-way, zoning districts, existing land uses and important physical features (including drainage ways) within five hundred (500) feet of property proposed for development.






Zoning Districts

| | |
|--|--|
| <p>Residential Zoning</p> <ul style="list-style-type: none"> E1, Single Family Estate Density E2, Residential Single Family, 2 Units/Acre E3, Residential Single Family, 3 Units/Acre R1, Single Family Low Density R2, Single Family Intermediate Density R3, Single Family Moderate Density R4, Medium Density Residential R4A, Hutchinson Island Medium Density Residential R5, High Density Residential <p>Open Space Zoning</p> <ul style="list-style-type: none"> OS1, General and Recreational Open Space OS2, Conservation Open Space <p>Planned Development Zoning</p> <ul style="list-style-type: none"> PD, Planned Development PUR, Planned Urban Redevelopment | <p>Commercial Zoning</p> <ul style="list-style-type: none"> C1, Office Commercial C2, Neighborhood Commercial C3, General Commercial C4, Central Commercial C5, Tourist Commercial C6, Marine Commercial CP1, Commercial Parkway <p>Industrial Zoning</p> <ul style="list-style-type: none"> I1, Light Industrial I2, Marine Industrial I3, Heavy Industrial <p>Agriculture Zoning (County)</p> <ul style="list-style-type: none"> AR1, Agriculture, Residential - 1 AG1, Agriculture - 1 AG2.5, Agriculture - 2.5 |
|--|--|



City of Fort Pierce
Planning Department
 Created By: Brandon Creagan
 Date Created: July 25, 2017





RG Towers, LLC

Ft Pierce Planning and Zoning
100 N. U.S. Highway 1
Fort Pierce, FL 34950

RE: RG Towers – Ft Pierce- Orange Ave Design Review Application Checklist (City Code of Ordinances 22-59)

Attached please find the following for review and approval:

- a. A survey -submitted with Development Review application
- b. A site analysis study – please refer to the landscape plan submitted with Development Review application
- c. A draft written narrative describing the design intent of the project, its goals and objectives and how it reflects the site analysis study results.
- d. Context photographs of neighboring uses and architectural styles.
- e. Photographs and/or drawings of architectural buildings or objects that serve as a precedent for the proposed building design. Models should be taken from local exemplary buildings, either existing or demolished. Documentation of such buildings is available in the city's planning department.
- f. Photographs of all existing structures located on the property. If existing structures on the property are more than fifty (50) years of age, documentation of these structures with data from the Florida Master Site File form is also required.
- g. Conceptual site plan- submitted with Development Review application
- h. Landscape plan, at the same scale as the site plan - submitted with Development Review application
- i. Accurate color rendering of proposed signs showing dimensions, type of lettering, materials and actual color samples that demonstrates cohesiveness with the project design.
- j. Exterior elevations showing architectural character, external architectural features and streetscape of the proposed development, including materials, colors, shadow lines and landscaping- elevation submitted with Development Review application
- k. Design review concurrent with conceptual development plan procedure according to subsection 22-58(e) is also available.

Submittal for Board Approval

- a. A written narrative describing how the project conforms to administrative approval and design review guidelines of this section.
- b. A final site plan meeting the requirements of section 22-58- submitted with Development Review application
- c. A final site lighting plan that meets the requirements of subsection 22-58(d)(8)- NA
- d. A final landscape plan that meets the requirements of Article XII, Landscaping and Trees. - submitted with Development Review application
- e. Final floor plans and elevation drawings (1/8" = 1'-0" minimum scale), as detailed under administrative approval, showing exterior building materials and colors with architectural

sections and details to adequately describe the project. - submitted with Development Review application

f. A color board (11"x17" maximum) containing actual color samples of all exterior finishes, keyed to the elevations, and indicating the manufacturer's name and color designation- no color-galvanized steel

Please let me know if you have any questions.

Sincerely,

Holly Valdez
RG Towers, LLC
V.P. Operations



RG Towers, LLC

Ft Pierce Planning and Zoning
100 N. U.S. Highway 1
Fort Pierce, FL 34950

RE: RG Towers - Ft Pierce Orange Ave Character and Intended Use Statement

RG Towers, LLC is applying for approval to build a 150' communications tower at the location shown below.

| | |
|-------------------|-------------------------------------|
| Tower Height/Type | 150' Monopole |
| Address | 2006 Orange Ave, Ft Pierce FL 34950 |
| Coordinates | Approximately 27.447636, -80.345960 |

The parcel is currently owned by Lesley Phillips and Abdel Jebbar Elbakkari. RG Towers, LLC entered into a Lease Agreement dated 9/27/17.

The character of the parcel is completely commercial as seen in the attached photographs. The intended use will be the development of a 150' monopole communication tower with a fenced compound to enclose the auxiliary equipment. The fenced compound will be landscaped per the code. This is to be an unmanned facility with only semiannual visits for maintenance outside of initial construction.

Please let me know if you have any questions.

Sincerely,

Scott Richards
RG Towers, LLC
CEO

Michelle Franklin, CFA -- Saint Lucie County Property Appraiser -- All rights reserved.

Property Identification

Site Address: 2006 ORANGE AVE
Sec/Town/Range: 09/35S/40E
Map ID: 24/09N
Zoning: C3

Parcel ID: 2409-605-0008-000-4
Account #: 22018
Use Type: 1100
Jurisdiction: Fort Pierce

Ownership

Lesley Phillips
Abdel Jebbar Elbakkari
2006 Orange AVE
Fort Pierce, FL 34950



Legal Description

FLORIANA PARK BLK 3 LOTS 3, 4 AND
5-LESS S 15 FT FOR ST- (OR 3822-1761)

Current Values

Just/Market Value: \$84,600
Assessed Value: \$84,600
Exemptions: \$0
Taxable Value: \$84,600
Taxes for this parcel: SLC Tax Collector's
Office [📄](#)
Download TRIM for this parcel: [Download PDF](#) [📄](#)

Total Areas

| | |
|--------------------------|--------|
| Finished/Under Air (SF): | 2,160 |
| Gross Area (SF): | 2,430 |
| Land Size (acres): | 0.45 |
| Land Size (SF): | 19,656 |

Sale History

| Date | Book/Page | Sale Code | Deed | Grantor | Price |
|--------------|-------------|-----------|------|--------------------|-----------|
| Dec 24, 2015 | 3822 / 1761 | 0002 | WD | Walker (TR) John C | \$83,600 |
| Nov 5, 2015 | 3805 / 1827 | 0111 | CT | LeDain Marie M | \$100 |
| Jun 25, 2014 | 3652 / 2867 | 0137 | WD | Walker (TR),John C | \$120,000 |
| Jun 3, 2014 | 3638 / 1302 | 0111 | CT | LeDain,Marie M | \$60,300 |
| May 25, 2005 | 2255 / 2189 | XX01 | QC | Blanc,Jean C | \$100 |

| | | | | | |
|--------------|-------------|------|----|--------------------|-----------|
| Apr 30, 2004 | 1971 / 3007 | XX00 | WD | Dunn Brothers Inc, | \$120,000 |
| Nov 1, 1981 | 0366 / 2466 | XX00 | CV | | \$125,000 |

Building Information (1 of 1)

Finished Area: 2,160 SF

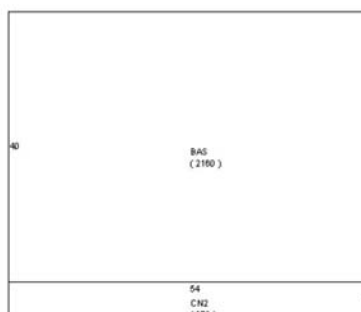
Gross Total Area: 2,430 SF

Exterior Data

| | | |
|-----------------------|--------------------------|---------------------------|
| View: | Roof Cover: Tar & Gravel | Roof Structure: Flat/Shed |
| Building Type: STRL | Year Built: 1957 | Frame: |
| Grade: Y_C | Effective Year: 1970 | Primary Wall: Conc Block |
| Story Height: 1 Story | No. Units: 2 | Secondary Wall: |

Interior Data

| | | |
|---------------|-----------------------|-----------------------------|
| Bedrooms: 0 | Electric: MAXIMUM | Primary Int Wall: |
| Full Baths: 0 | Heat Type: FrcdHotAir | Avg Hgt/Floor: 0 |
| Half Baths: 0 | Heat Fuel: ELEC | Primary Floors: Vinyl Tiles |
| A/C %: 100% | Heated %: 100% | Sprinkled %: 0% |



Sketch Area Legend

| Sub Area | Description | Area | Fin. Area | Perimeter |
|----------|-------------|------|-----------|-----------|
| BAS | BASE AREA | 2160 | 2160 | 188 |
| CN2 | CANOPY | 270 | 0 | 118 |

Special Features and Yard Items

| Type | Qty | Units | Year Blt |
|-------------|-----|-------|----------|
| CEMENT CURB | 1 | 42 | 1970 |
| ASP2 LOW | 1 | 5409 | 1970 |

Current Year Values

Current Values Breakdown


| | |
|-------------------------------|----------|
| Building: | \$40,400 |
| Land: | \$44,200 |
| Just/Market: | \$84,600 |
| Ag Credit: | \$0 |
| Save Our Homes or 10% Cap: | \$0 |
| Assessed: | \$84,600 |
| Exemption(s): | \$0 |
| Taxable: | \$84,600 |

Current Year Exemption Value Breakdown

| Tax Year | Grant Year | Code | Description | Amount |
|----------|------------|------|-------------|--------|
|----------|------------|------|-------------|--------|

Current Year Special Assessment Breakdown

| Start Year | AssessCode | Units | Description | Amount |
|------------|------------|-------|-------------------------------|----------|
| 1999 | 0041 | 4.9 | Fort Pierce Stormwater Charge | \$264.60 |

This does not necessarily represent the total Special Assesments that could be charged against this property. The total amount charged for special assessments is reflected on the most current tax statement and information is available with the SLC Tax Collector's Office .

Historical Values

| Year | Just/Market | Assessed | Exemptions | Taxable |
|------|-------------|-----------|------------|-----------|
| 2017 | \$84,600 | \$84,600 | \$0 | \$84,600 |
| 2016 | \$84,300 | \$84,300 | \$0 | \$84,300 |
| 2015 | \$105,200 | \$105,200 | \$0 | \$105,200 |

Permits

| Number | Issue Date | Description | Amount | Fee |
|------------|--------------|------------------------|---------|-------|
| BP2006-90 | Jan 25, 2006 | Roof | \$5,000 | \$50 |
| F900001019 | Aug 7, 1990 | Roof | \$900 | \$900 |
| 0900025541 | Nov 16, 2007 | Sprinkler System | \$0 | \$50 |
| BP11-1029 | Jun 9, 2011 | Electric | \$104 | \$155 |
| BP16-1588 | Jun 23, 2016 | Alterations/Remodeling | \$4,000 | \$0 |

Notice: This does not necessarily represent all the permits for this property. Click the following link to check for additional permit data in Fort Pierce

This information is believed to be correct at this time but it is subject to change and is not warranted.
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Prepared by
Kimberly Douglas, an employee of
First American Title Insurance Company
729 South Federal Highway, Ste 103
Stuart, Florida 34994
(772)286-0850

Return to: Grantee

File No.: 2071-2258822
Consideration: \$83,600.00

WARRANTY DEED

This indenture made on **December 30, 2015** A.D., by

John C. Walker, as Trustee of the John C. Walker Trust dated July 26, 1994

whose address is: **364 River Edge Road, Jupiter, FL 33477**
hereinafter called the "grantor", to

Lesley Phillips and Abdel Jebbar ElBakkari, wife and husband

whose address is: **2006 Orange Ave, Fort Pierce, FL 34950**
hereinafter called the "grantee":

(Which terms "Grantor" and "Grantee" shall include singular or plural, corporation or individual, and either sex, and shall include heirs, legal representatives, successors and assigns of the same)

Witnesseth, that the grantor, for and in consideration of the sum of Ten Dollars, (\$10.00) and other valuable considerations, receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the grantee, all that certain land situate in **St. Lucie County, Florida**, to-wit:

Lots 3, 4 and 5 less the South 15 feet thereof, Block 3 of FLORIANA PARK, according to the Plat thereof as recorded in Plat Book 2, page 7C, of the Public Records of St. Lucie County, Florida.

Parcel Identification Number: **2409-605-0008-000/4**

Subject to all reservations, covenants, conditions, restrictions and easements of record and to all applicable zoning ordinances and/or restrictions imposed by governmental authorities, if any.

TOGETHER WITH all singular the tenements, hereditaments and appurtenances belonging to or in anywise appertaining to that real property.

AND the party of the first part does covenant to and with the party of the second part, their heirs and assigns, that in all things preliminary to and in and about the sale and this conveyance the Laws of Florida have been followed and complied with in all respects. .

In Witness Whereof, the parties of the first part have hereunto set their hand(s) and seal(s) the day and year first above written.

John C. Walker
John C. Walker, individually and as Trustee of the John C. Walker Trust dated July 26, 1994

Signed, sealed and delivered in the presence of these witnesses:

Kim Douglas
Witness Signature

Print Name: *Kim Douglas*

Toni Lynn Turner
Witness Signature

Print Name: *Toni-Lynn Turner*

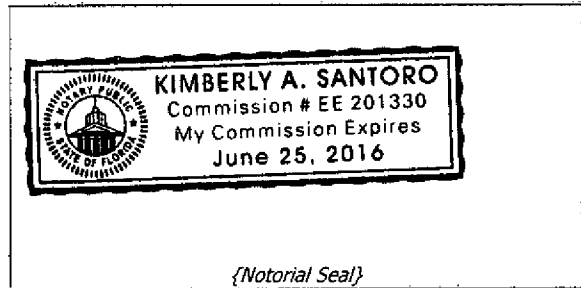
State of **Florida**

County of **Martin**

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED before me on **December 24th, 2015**, by **John C. Walker, a single man, individually and as Trustee of the John C. Walker Trust dated July 26, 1994** who is/are personally known to me or has/have produced a valid driver's license as identification.

Kimberly A. Santoro
Notary Public

Kimberly A. Santoro
(Printed Name)



My Commission expires: _____

Michael F. Plahovinsak, P.E.

18301 State Route 161, Plain City, Ohio 43064

(614) 398-6250 - mike@mfpeng.com

December 4, 2017

RG Towers

Re: Proposed 150-ft Monopole
Located in Saint Lucie Co., FL: TC11 Ft. Pierce Orange Ave.
MFP Project #: 23517-765 / TAPP Project Number: TP-15913

I understand that there may be some concern on the part of local building officials regarding the potential for failure of the proposed communication monopole. Communication structures are designed in accordance with the Telecommunications Industry Association ANSI/TIA-222-G, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". This Structure is to be fabricated by TransAmerican Power Products

I have designed this monopole to withstand a 3-sec. gusted wind speed of 123 mph (Vasd) as recommended by ANSI/TIA-222-G for Saint Lucie Co., FL. The design also conforms to the requirements of the 2014 Florida Building Code for an equivalent ultimate wind speed of 159 mph (Vult).

This monopole has been designed to accommodate a theoretical fall radius. The upper 25' of the pole has been designed to meet the wind loads of the design, however, the lower portion of the pole has been designed with a minimum 10% extra capacity. Assuming the pole has been designed according to my design, and well maintained, in the event of a failure due to extreme wind and comparable appurtenance antenna load (winds in excess of the design wind load), it would yield/buckle at the 125' elevation. The yielded section would result in a maximum 25' fall radius, but would most likely remain connected and hang from the standing section.

The structure has been designed with all of the applicable factors as required by the code. A properly designed, constructed and maintained pole has never collapsed; monopoles are safe structures with a long history of reliable operation.

I hope this review of the monopole design has given you a greater degree of comfort regarding the design capacity inherent in pole structures. If you have any additional questions please call me at 614-398-6250 or email mike@mfpeng.com.

Sincerely,

Michael F. Plahovinsak, P.E.



Michael F. Plahovinsak, P.E.
Sole Proprietor - Independent Engineer
P.E. Licensed in 48 Jurisdictions



SITE LICENSE AGREEMENT

This Site License Agreement ("SLA") is entered into this _____ day of _____, 2017 ("SLA Effective Date") between RG Towers, LLC, hereinafter designated as LICENSOR, and T-Mobile South LLC, hereinafter designated as LICENSEE.

1. Integration with Master Lease Agreement: This SLA is entered into pursuant to that certain Master License Agreement between T-MOBILE CENTRAL LLC, T-MOBILE SOUTH LLC, T-MOBILE WEST LLC, T-MOBILE PUERTO RICO LLC, and POWERTEL/MEMPHIS, Inc. and RG Towers, LLC dated October 1, 2012 ("MLA"). All of the terms and conditions of the MLA are incorporated herein by this reference and made a part hereof without the necessity of repeating or attaching the MLA. Except as set forth in the MLA, in the event of a contradiction, modification or inconsistency between the terms of the MLA and this SLA, the terms of the MLA shall govern. Capitalized terms used in this SLA shall have the same meaning described for them in the MLA unless otherwise indicated herein.

2. Site Number and Name (if applicable):

LICENSOR:TC11 Fort Pierce Orange Ave

LICENSEE: A2P0227B

3. Site Address and Legal Description: More particularly described in Attachment 1, attached hereto and incorporated herein.

4. Site Latitude and Longitude: 27.447662, -80.345875

5. Description of Antenna Facilities: LICENSEE Antenna Facilities to be placed on the Property and the location of the Premises are detailed in and shall be consistent with Attachment 2, attached hereto and incorporated herein.

6. Term: The term of this SLA shall be as set forth in Section 2(b) of the MLA and commence upon either [check one box]:

The earlier of (i) two hundred seventy (270) days after the SLA Effective Date; or (ii) the date of the Notice to Proceed under Section 10(a) of the MLA; or

_____ 2017

7. Rent Commencement: The first payment of Rent shall be due on the SLA Commencement Date.

8. Rent Amount: The monthly Rent for the initial term of this SLA shall be to be paid on the first day of the month, in advance, to LICENSOR at the following address: 2141 Alternate A1A South, Suite 440, Jupiter, FL 33477; or to such other person, firm or place as LICENSOR may, from time to time, designate in writing at least thirty (30) days in advance of any rental payment date.

9. Prime Lease. If the Property is subject to a Prime Lease, a copy of such agreement is attached hereto as Attachment 3. If consent is required from the Owner, it is attached hereto as Attachment 4.

10. Licensor Contact for Emergency (not for legal notices): RG Towers, LLC

11. Licensee Contact for Emergency (not for legal notices):

12. Special Provisions (insert any special provisions):

IN WITNESS WHEREOF, the Parties hereto have set their hands and affixed their respective seals the day and year first above written.

LICENSOR: RG Towers, LLC

BY: _____

WITNESS

PRINT NAME: Scott Richards

TITLE: CEO

WITNESS

DATE: _____

LICENSEE: T-Mobile South LLC

BY: _____

WITNESS

PRINT NAME:

TITLE:

WITNESS

DATE: _____

ATTACHMENTS:

- Attachment 1: Legal Description of Land
- Attachment 2: Licensor's Application Form Completed by Licensee
- Attachment 3: Prime Lease
- Attachment 4: Owner's Consent
- Attachment 5: Memorandum of Site License Agreement
- Attachment 6: Approved Plans

Attachment 1: Legal Description of Land

Legal Description of Land

PARENT TRACT

(PER OFFICIAL RECORD BOOK 3822, PAGE 1761 OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA)

LOTS 3, 4 AND 5, LESS THE SOUTH 15 FEET THEREOF, BLOCK 3 OF FLORIANA PARK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGE 7C, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

Attachment 2: Licensor's Application Form Completed by Licensee

COLLOCATION APPLICATION

RG Towers, LLC
 2141 Alternate A1A South
 Suite 440
 Jupiter, Florida 33477
 Phone: (561) 748-0302 Fax: (561) 748-0303
 E-mail inquiries or applications to: hginn@rgpartners.com
 Contact: Harlan Ginn 561-309-8072

PLEASE COMPLETE THE FOLLOWING APPLICATION FOR THE SITE YOU ARE INTERESTED IN CONSTRUCTING OR INSTALLING UPON. THIS INFORMATION IS USED TO ASSESS OCCUPANCY SUITABILITY AND FOR PREPARATION OF THE AGREEMENT. THE APPLICATION MUST BE COMPLETED IN ITS ENTIRETY.

| | |
|-----------------------|---------|
| DATE SUBMITTED | 12-4-17 |
|-----------------------|---------|

| LESSEE INFORMATION (as it should appear on the agreement) | | | | | |
|---|---------------------------------|--------|--------------|------|-------|
| Company Name: | T-Mobile South LLC | | | | |
| Street Address: | 1300 Concord Terrace, Suite 200 | | | | |
| City: | Sunrise | State: | FL | Zip: | 33323 |
| Phone: | (954) 693-7209 | Fax: | 954-693-7209 | | |
| Entity Type (Partnership, Corporation., etc): | LLC | | | | |

| LESSEE LEGAL NOTICE INFORMATION (additional notice) | | | | | |
|---|----------------------------------|--------|------|------|-------|
| Company Name: | T-Mobile | | | | |
| Point of Contact: | Attn: Legal | | | | |
| Street Address: | 12920 SE 38 th Street | | | | |
| City: | Bellevue | State: | WA | Zip: | 98006 |
| Phone: | - - | ext.: | Fax: | - - | |

| CARRIER CONTACT INFORMATION (market contact of lessee) | | | | | |
|--|---------------------------------|--------|-----|------|-------|
| Company Name: | T-Mobile | | | | |
| Point of Contact: | Patrick Keane | | | | |
| Street Address: | 1300 Concord Terrace, Suite 200 | | | | |
| City: | Sunrise | State: | FL | Zip: | 33323 |
| Phone: | (954) 514-8076 | Fax: | - - | | |
| E-mail: | Patrick.keane@t-mobile.com | | | | |

| BILLING INFORMATION (if different from lessee information) | | | | | |
|--|----------------------------------|--------|-----|------|--|
| Company Name: | T-Mobile | | | | |
| Point of Contact: | | | | | |
| Street Address: | 12920 SE 38 th Street | | | | |
| City: | | State: | | Zip: | |
| Phone: | . | Fax: | - - | | |
| E-mail: | @ . | | | | |

| CUSTOMER REPRESENTATIVE/SITE ACQUISITION CONTACT INFORMATION (main point of contact for application information) | | | | | |
|--|-------------------------------------|--------|--------------|------|-------|
| Company Name: | RG Towers, LLC | | | | |
| Point of Contact: | Harlan Ginn | | | | |
| Street Address: | 2141 Alternate A1A South, Suite 440 | | | | |
| City: | Jupiter | State: | FL | Zip: | 33477 |
| Phone Number: | (561) 309-8072 | Fax: | 561-748-0303 | | |
| E-mail: | hginn@rgpartners.com | | | | |

| SITE INFORMATION | | | | | |
|----------------------|-------------------------|----------------------------|------------|--------|----|
| RG Towers Site ID: | TC11 | Lessee Site ID: | A2P0227B | | |
| RG Towers Site Name: | Ft. Pierce- Orange Ave. | Lessee Site Name: | | | |
| Street Address: | 2006 Orange Ave. | | | | |
| City: | Ft. Pierce | County: | St. Lucie | State: | FL |
| Latitude (NAD 83): | 27.447662 | Longitude (NAD 83): | -80.345875 | | |
| Tower Height/Type: | 150' Monopole | Desired Installation Date: | | | |

DETAILED DESCRIPTION OF PROPOSED INSTALLATION / SPECIAL INSTRUCTIONS

150' Monopole. T-Mobile to install 4 Sector array, within the 140 ft and 150 ft height level
 Initial Equipment Configuration:
 (12) Quad Antennas (Cellmax- CMA-BDHH/3321)
 (3) Quad Antennas (Commscope- FF-65C-R1)
 (15) RRUs
 (2) Hybrid Cables
 (2) Large COVPs
 (4) Equipment Cabinets
 (1) Generator
 200 Square Feet of Ground Space

ANTENNAS & TRANSMISSION LINES

| Lessee Owned Antennas | Sector 1 | Sector 2 | Sector 3 | Sector 4 | Sector 5 | Sector 6 |
|-----------------------------------|---|---|--|---|----------|--------------------------------|
| Antenna Height ACL | 145' | 145' | 145' | 145' | | |
| Antenna Quantity | 3/1 | 3/1 | 3/1 | 3 | | |
| Antenna Manufacturer | Cellmax/Commscope | Cellmax/Commscope | Cellmax/Commscope | Cellmax | | |
| Antenna Model (Attach Spec Sheet) | CMA-BDHH/321 FF-65C-R1 | CMA-BDHH/321 FF-65C-R1 | CMA-BDHH/321 FF-65C-R1 | CMA-BDHH/321 | | |
| Antenna Dimensions & Weight | L 40.6" x W 23.2" x D 6.1", 59 lbs/L 95.9" x W 25.2" x D 9.3", 117.9 lbs | L 72" x W 25.2" x D 9.3", 99.2 lbs L 95.9" x W 25.2" x D 9.3", 117.9 lbs | L 72" x W 25.2" x D 9.3", 99.2 lbs L 95.9" x W 25.2" x D 9.3", 117.9 lbs | L 40.6" x W 23.2" x D 6.1", 59 lbs | | |
| Antenna - Upright/Inverted | | | | | | |
| ERP (Watts) | | | | | | |
| Azimuth | 45 | 135 | 225 | 315 | | |
| Antenna Mount Type | | | | | | |
| TMA or RRU or COVP | 5 RRUs, 1 COVP | 5 RRUs, 1 COVP | 3 RRUs | 2 RRUs | | |
| Manufacturer | AirScale, Flexi,Nokia,Raycap | AirScale, Flexi,Nokia,Raycap | AirScale, Flexi, Nokia | AirScale, Flexi | | |
| Model | (2) FRIJ, (2) FHFB, (1) AHLOA, ASU9338TYP01 | (2) FRIJ, (2) FHFB, (1) AHLOA, ASU9338TYP01 | (1) FRIJ, (1) FHFB, (1) AHLOA | (1) FRIJ, (1) FHFB | | |
| Dimensions | L 24.8" x W 16.1" x D 5.0", 46.3 lbs/L 34.3" x W 12.6" x D 7.8", 68.5 lbs/L 22"x W 12 x D 7.4", 83.6 lbs./L 20.38" x W 18.86" x D 5.83", 19 lbs | L 24.8" x W 16.1" x D 5.0", 46.3 lbs/L 34.3" x W 12.6" x D 7.8", 68.5 lbs/L 22"x W 12 x D 7.4", 83.6 lbs./L 20.38" x W 18.86" x D 5.83", 19 lbs | L 24.8" x W 16.1" x D 5.0", 46.3 lbs/L 34.3" x W 12.6" x D 7.8", 68.5 lbs/L 22"x W 12 x D 7.4", 83.6 lbs | L 24.8" x W 16.1" x D 5.0", 46.3 lbs/L 34.3" x W 12.6" x D 7.8", 68.5 lbs | | |
| Number of Transmission Lines | 1 | 1 | | | | |
| Diameter of Transmission Lines | 1.58" | 1.58" | | | | |
| Satellite/GPS Antennas | | | | | | |
| Model: | | Size: | | Mounting: | | Mounting Height (if on tower): |
| GPS: | (Select) | Mounting Height (if on tower): | | | | |

GROUND EQUIPMENT

| | | | | |
|---|-----------|--|-----------------|---------------------------------------|
| Dimensions of Lessee's Building or Pad: | 10' x 20' | Total Ground Space: | 200 Square Feet | 2 COVPs |
| Power Requirements (volts): | | HVAC Requirements (BTU): | AC Meter: | (Select) |
| Required AC Breaker (amps): | | Maximum AC Current Draw @ Given Line Voltage (amps): | | |
| Back Up Power Required? | (Select) | Back Up Power Space | ' x ' | Kilowatt Output: 30 kW |
| Generator Make: | Generac | Generator Model: | SD030 | Generator Dimensions: 76' x 36' x 46' |

| | | | | | |
|------------------------|--------|---------------------|--|----------------------|-------|
| Fuel/Type Containment: | Diesel | Fuel Tank Capacity: | | Fuel Tank Dimension: | ' x ' |
|------------------------|--------|---------------------|--|----------------------|-------|

| FREQUENCY | | | |
|------------------------|-----------------------|------------------------------|-------------------------------|
| Technology Type | Tx Frequencies | Rx Frequencies | Transmit Power (watts) |
| PCS UMTS | 1965-1990 MHz | 1885-1910 MHz | W |
| AWS LTE | 2135-2155 MHz | 1735-1755 MHz | W |
| 700 MHz | 728-734 MHz | 698-704 MHz | W |
| (Select Other) | | | W |
| Call Sign: | | FCC License Expiration Date: | |



RG Towers, LLC

10/20/17

RE: RG Towers-Ft Pierce- Orange Ave Affidavit 22-163-An affidavit from the property owner or applicant acknowledging acceptance of the requirements of section 22-163

RG Towers, LLC., applicant for the construction of a new communication tower, acknowledges the requirement per Section 22-163 for the removal of abandoned antenna support structure.

It is understood that prior to building permit we shall submit required documentation.

(a)

At time of building permit the applicant shall enter into a contractually enforceable agreement with the city which requires the applicant or the owner of the antenna support structure to remove the antenna support structure upon its abandonment.

(b)

Prior to issuance of any permit in accordance with this article, the property owner or tower operator shall submit a bond, surety or other financial guaranty for the use and benefit of the city, to ensure the removal of abandoned communication towers. The form of surety shall be subject to approval by the director of planning and the city attorney. The required surety shall be irrevocable, unless released by the city. The surety shall be utilized to cover the costs of removal and disposal of abandoned towers and shall consist of the following:

(1)

Submittals of an estimate from a certified structural engineer indicating the costs to remove and dispose of the tower;

(2)

A surety equivalent to one hundred (100) per cent of the estimated costs to remove and dispose of the tower.

The planning director, subject to review by the city attorney, may accept documentation from a tower operator or property owner that adequate resources or irrevocable contract obligations are available to remove obsolete or abandoned communication towers.

(c)

In the event all legally approved use of any antenna support structure has been discontinued for a period of one hundred eighty (180) consecutive days, the antenna support structure shall be deemed abandoned. Determination of the date of abandonment shall be made by the department of code enforcement, which may request suitable documentation from the owner of the antenna support structure regarding any matter relating to whether the antenna support structure is currently being used or not;

(d)

At such time as the department of code enforcement determines that an antenna support structure is abandoned, it shall provide the antenna support structure owner with written notice of an abandonment determination by certified mail. Failure or refusal by the owner to respond within sixty (60) days of receipt of such notice, shall constitute prima facie evidence that the antenna support structure has been abandoned.

(e)

If the owner of the antenna support structure fails to respond or fails to demonstrate that the antenna support structure is not abandoned, the antenna support structure shall be considered abandoned and the owner of the antenna support structure shall have an additional one hundred twenty (120) days within which to:

(1)

Reactivate the use of the antenna support structure or transfer the antenna support structure to another owner who makes actual use of the antenna support structure within the one hundred twenty (120) day period; or

(2)

Dismantle and remove the antenna support structure. At the earlier of one hundred twenty-one (121) days from the date of abandonment without reactivation or upon completion of dismantling and removal, any special exception approval for the antenna support structure shall automatically expire.

(Ord. No. J-452, § 1, 9-21-98)

Sincerely,

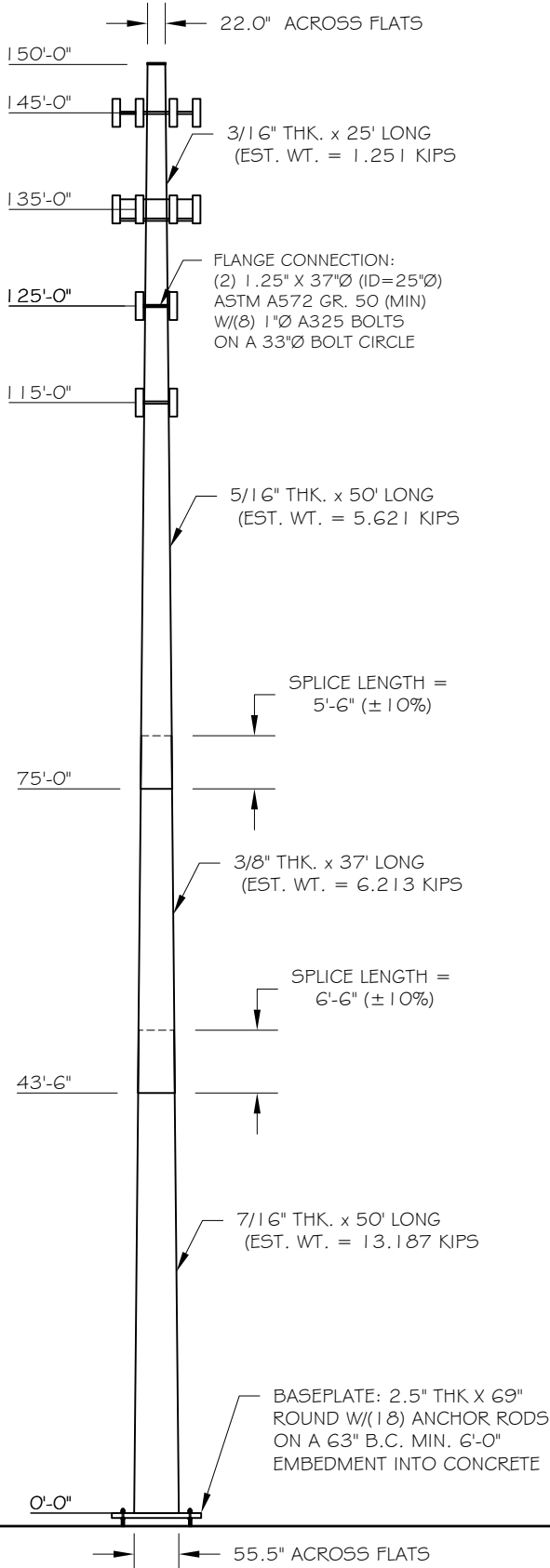
Scott Richards
CEO
RG Towers, LLC



TransAmerican Power Products, Inc.

2427 Kelly Lane
Houston, Texas 77068

PH: 281-444-8277 / FX: 281-444-7270



| | |
|---|------------------------|
| Page 1 of 2 | Job Number: 23517-765 |
| Eng: MFP | Customer Ref: TP-15913 |
| | Date: 12/4/2017 |
| Structure: 150-FT MONOPOLE | |
| Site: TC 11 FT. PIERCE ORANGE AVE. | |
| Location: SAINT LUCIE CO., FL / 27°26'52", -80°20'45" | |
| Owner: RG TOWERS | |
| Revision No.: Revision Date: | |

| DESIGN | | | |
|---|---------------|-----------------|--------------|
| Building Code: 2014 FLORIDA BUILDING CODE | | | |
| Design Standard: ANSI/TIA-222-G-2 | | | |
| Wind Speed Load Cases: 3-SEC. GUSTED WIND SPEED | | | |
| Load Case #1: 123 MPH Design Wind Speed | | | |
| Load Case #2: 60 MPH Service Wind Speed | | | |
| POLE DESIGNED FOR AN EQUIVALENT (V _{ULT}) 159 MPH ULTIMATE WIND SPEED | | | |
| Structure Class | Exposure Cat. | Topography Cat. | Crest Height |
| II | C | I | |

| EQUIPMENT LIST | |
|----------------|---|
| Elev. | Description |
| 145 | (4) FASB ANTENNA + (4) RRU |
| 145 | 12-FT LOW PROFILE PLATFORM |
| 135 | (6) X7CQAP-FRO-845 ANTENNA + (3) RRU |
| 135 | 12-FT PLATFORM WITH HANDRAIL |
| 125 | (3) ET-X-UW-G8-14-G5-18 ANTENNA + (15) RRU/RAYCAP |
| 125 | FLUSH MOUNTS |
| 115 | (3) ET-X-UW-G8-14-G5-18 ANTENNA + (15) RRU/RAYCAP |
| 115 | FLUSH MOUNTS |

ANTENNA FEED LINES ROUTED ON THE INSIDE OF THE POLE
POLE DESIGNED FOR A MAX 25-FT FALL RADIUS

| STRUCTURE PROPERTIES | | | | | |
|---|-------------|----------------|----------------------------------|---------------|---------------|
| Cross-Section: 18-Sided | | | Taper: 0.23250 in/ft | | |
| Shaft Steel: ASTM A572 GR 65 | | | Baseplate Steel: ASTM A572 GR 50 | | |
| Anchor Rods: 2.25 in. AG 15 GR. 75 X 7'-0" LONG | | | | | |
| Sect. | Length (ft) | Thickness (in) | Splice (ft) | Top Dia. (in) | Bot Dia. (in) |
| 1 | 25.00 | 0.1875 | 0.00 | 22.00 | 27.81 |
| 2 | 50.00 | 0.3125 | 5.50 | 27.81 | 39.44 |
| 3 | 37.00 | 0.3750 | 6.50 | 37.53 | 46.14 |
| 4 | 50.00 | 0.4375 | 0.00 | 43.88 | 55.50 |



MICHAEL F. PLAHOVINSAK, P.E. #66723
Sole Proprietor - Independent Engineer
18301 S.R. 161, Plain City, OH 43064
614-398-6250 / mike@mfpeng.com

BASE REACTIONS FOR FOUNDATION DESIGN

Moment: 5660 ft-kip
Shear: 53 kip
Axial: 51 kip



TransAmerican Power Products, Inc.

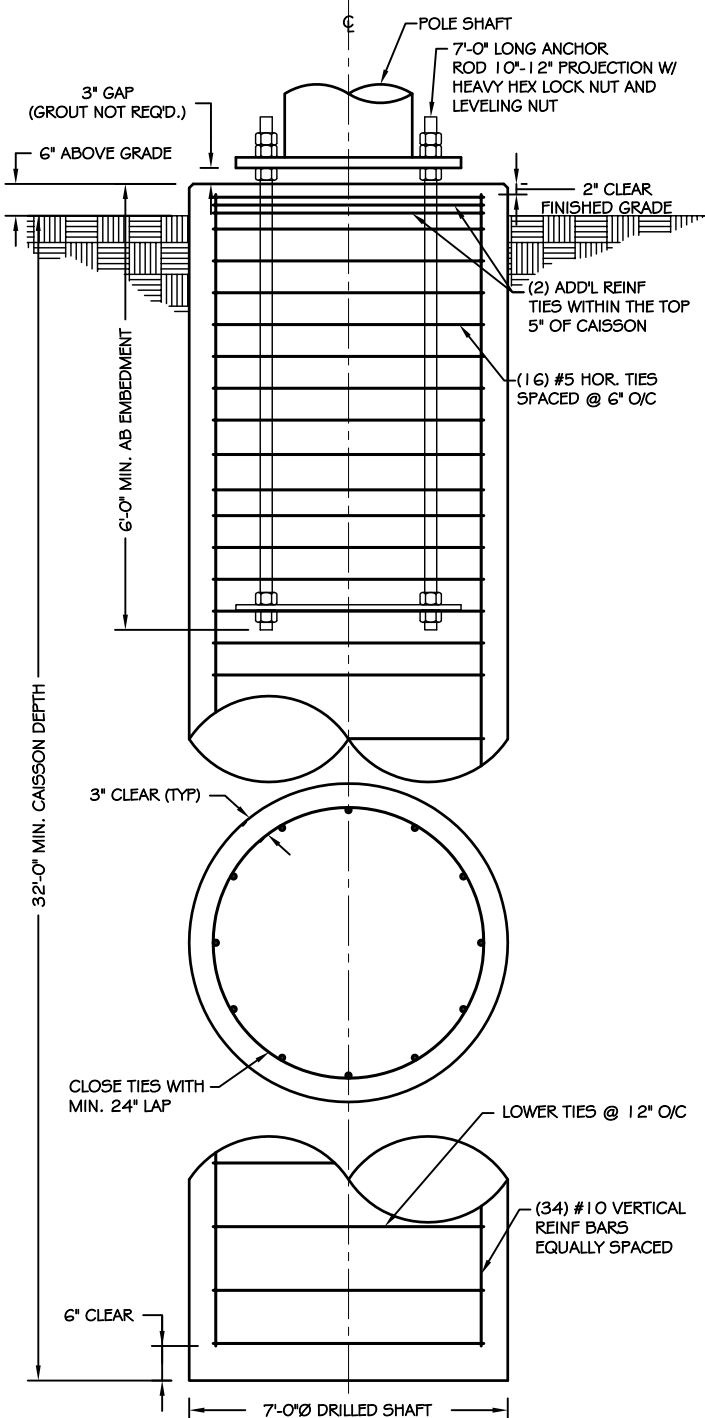
2427 Kelly Lane
Houston, Texas 77068

PH: 281-444-8277 / FX: 281-444-7270

| | |
|---|------------------------|
| Page 2 of 2 | Job Number: 23517-765 |
| Eng: MFP | Customer Ref: TP-15913 |
| | Date: 12/4/2017 |
| Structure: 150-FT MONOPOLE | |
| Site: TC 11 FT. PIERCE ORANGE AVE. | |
| Location: SAINT LUCIE CO., FL / 27°26'52", -80°20'45" | |
| Owner: RG TOWERS | |
| Revision No.: Revision Date: | |

FOUNDATION NOTES:

1. ALL FOUNDATION CONCRETE SHALL USE TYPE II CEMENT AND ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. CONCRETE SHALL HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.46 AND SHALL BE AIR ENTRAINED 6% (± 1.5%). ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318, "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION.
 2. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 VERTICAL BARS SHALL BE GRADE 60, AND TIES OR STIRRUPS SHALL BE A MINIMUM OF GRADE 40. THE PLACEMENT OF ALL REINFORCEMENT SHALL CONFORM TO ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.
 3. CAISSON FOUNDATION INSTALLATION SHALL BE IN ACCORDANCE WITH ACI 336, "STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF DRILLED PIERS", LATEST EDITION.
 4. THE CONTRACTOR SHALL DETERMINE THE MEANS AND METHODS TO SUPPORT THE EXCAVATION DURING CONSTRUCTION. THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND SHALL CONSULT THE GEOTECHNICAL ENGINEER AS NECESSARY PRIOR TO CONSTRUCTION.
 5. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL REPORT BY:
ENGINEER: ENVIRONMENTAL CORP OF AMERICA
REPORT NO.: R1386 (DATED 1/4/16)
- PLEASE NOTE - THE SOILS REPORT USED FOR THIS DESIGN IS BASED ON A SITE WITHIN THE SAME CITY AS THIS SITE. A SITE SPECIFIC SOILS INVESTIGATION SHALL BE COMPLETED AND REVIEWED PRIOR TO FINAL CONSTRUCTION.
6. ESTIMATED CONCRETE VOLUME = 46 CUBIC YARDS.
 7. THE FOUNDATION HAS BEEN DESIGNED TO RESIST THE FOLLOWING FACTORED LOADS:
MOMENT: 5660 FT*KIPS
SHEAR: 53 KIPS
AXIAL: 51 KIPS
 8. GEOTECHNICAL REPORT INDICATES GROUNDWATER MAY BE ENCOUNTERED AT 2'-6" BELOW GRADE.



CAISSON FOUNDATION

NOT TO SCALE



MICHAEL F. PLAHOVINSAK, P.E. #66723
Sole Proprietor - Independent Engineer
18301 S.R. 161, Plain City, OH 43064
614-398-6250 / mike@mfpeng.com

| | | |
|--|---|----------------------------------|
| tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com | Job 150-ft Monopole - MFP #23517-765 r1 | Page 1 of 6 |
| | Project TC11 Ft. Pierce Orange Ave. | Date 10:23:51 12/04/17 |
| | Client TP-15913 | Designed by Mike |

Tower Input Data

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

Tower is located in Saint Lucie County, Florida.

Basic wind speed of 123 mph.

Structure Class II.

Exposure Category C.

Topographic Category 1.

Crest Height 0.00 ft.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

| Section | Elevation ft | Section Length ft | Splice Length ft | Number of Sides | Top Diameter in | Bottom Diameter in | Wall Thickness in | Bend Radius in | Pole Grade |
|---------|-----------------|-------------------------|------------------------|-----------------------|-----------------------|--------------------------|-------------------------|----------------------|---------------------|
| L1 | 150.00-125.00 | 25.00 | 0.00 | 18 | 22.0000 | 27.8100 | 0.1875 | 0.7500 | A572-65 (65 ksi) |
| L2 | 125.00-75.00 | 50.00 | 5.50 | 18 | 27.8100 | 39.4400 | 0.3125 | 1.2500 | A572-65 (65 ksi) |
| L3 | 75.00-43.50 | 37.00 | 6.50 | 18 | 37.5357 | 46.1400 | 0.3750 | 1.5000 | A572-65 (65 ksi) |
| L4 | 43.50-0.00 | 50.00 | | 18 | 43.8784 | 55.5000 | 0.4375 | 1.7500 | A572-65 (65 ksi) |

Tapered Pole Properties

| Section | Tip Dia. in | Area in ² | I in ⁴ | r in | C in | I/C in ³ | J in ⁴ | It/Q in ² | w in | w/t |
|---------|----------------|-------------------------|----------------------|---------|---------|------------------------|----------------------|-------------------------|---------|--------|
| L1 | 22.3394 | 12.9812 | 780.3007 | 7.7434 | 11.1760 | 69.8193 | 1561.6281 | 6.4918 | 3.5420 | 18.891 |
| | 28.2390 | 16.4388 | 1584.6545 | 9.8060 | 14.1275 | 112.1682 | 3171.3942 | 8.2210 | 4.5646 | 24.344 |
| L2 | 28.2390 | 27.2741 | 2605.3977 | 9.7616 | 14.1275 | 184.4206 | 5214.2237 | 13.6396 | 4.3446 | 13.903 |
| | 40.0484 | 38.8096 | 7506.5554 | 13.8903 | 20.0355 | 374.6624 | 15022.9881 | 19.4085 | 6.3914 | 20.453 |
| L3 | 39.4135 | 44.2305 | 7716.6233 | 13.1920 | 19.0681 | 404.6868 | 15443.4003 | 22.1195 | 5.9463 | 15.857 |
| | 46.8518 | 54.4718 | 14413.7186 | 16.2466 | 23.4391 | 614.9428 | 28846.4032 | 27.2411 | 7.4606 | 19.895 |
| L4 | 46.0894 | 60.3232 | 14382.0201 | 15.4215 | 22.2902 | 645.2159 | 28782.9645 | 30.1673 | 6.9526 | 15.892 |
| | 56.3562 | 76.4612 | 29288.0331 | 19.5472 | 28.1940 | 1038.8038 | 58614.6042 | 38.2378 | 8.9980 | 20.567 |

Feed Line/Linear Appurtenances - Entered As Area

| Description | Face or Leg | Allow Shield | Component Type | Placement ft | Total Number | | C _{AA} ft ² /ft | Weight plf |
|-------------|-------------------|-----------------|-------------------|-----------------|-----------------|--------|--|---------------|
| 1 5/8" | C | No | Inside Pole | 145.00 - 0.00 | 18 | No Ice | 0.00 | 0.92 |
| 1 5/8" | C | No | Inside Pole | 135.00 - 0.00 | 18 | No Ice | 0.00 | 0.92 |
| 1 5/8" | C | No | Inside Pole | 125.00 - 0.00 | 18 | No Ice | 0.00 | 0.92 |
| 1 5/8" | C | No | Inside Pole | 115.00 - 0.00 | 18 | No Ice | 0.00 | 0.92 |

| | | | | |
|--|----------------|-------------------------------------|--------------------|-------------------|
| tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com | Job | 150-ft Monopole - MFP #23517-765 r1 | Page | 2 of 6 |
| | Project | TC11 Ft. Pierce Orange Ave. | Date | 10:23:51 12/04/17 |
| | Client | TP-15913 | Designed by | Mike |

Discrete Tower Loads

| <i>Description</i> | <i>Face or Leg</i> | <i>Offset Type</i> | <i>Offsets: Horz Lateral Vert ft ft ft</i> | <i>Azimuth Adjustment °</i> | <i>Placement ft</i> | | <i>C_AA_A Front ft²</i> | <i>C_AA_A Side ft²</i> | <i>Weight K</i> |
|--|----------------------------|------------------------|--|-------------------------------------|-------------------------|--------|--|---|---------------------|
| Nokia FASB Antenna w/ mount pipe | A | From Face | 3.00 0.00 0.00 | 0.0000 | 145.00 | No Ice | 12.65 | 15.82 | 0.24 |
| Nokia FASB Antenna w/ mount pipe | B | From Face | 3.00 0.00 0.00 | 0.0000 | 145.00 | No Ice | 12.65 | 15.82 | 0.24 |
| Nokia FASB Antenna w/ mount pipe | C | From Face | 3.00 0.00 0.00 | 0.0000 | 145.00 | No Ice | 12.65 | 15.82 | 0.24 |
| Nokia FASB Antenna w/ mount pipe | A | From Face | 3.00 0.00 0.00 | 0.0000 | 145.00 | No Ice | 12.65 | 15.82 | 0.24 |
| (4) Nokia FRGB | A | From Face | 2.00 0.00 0.00 | 0.0000 | 145.00 | No Ice | 1.39 | 2.82 | 0.05 |
| 12' Low Profile Platform ** | C | None | | 0.0000 | 145.00 | No Ice | 30.00 | 30.00 | 1.10 |
| (2) CSS X7CQAP-FRO-845-V w/ mount pipe | A | From Face | 3.00 0.00 0.00 | 0.0000 | 135.00 | No Ice | 16.80 | 11.58 | 0.10 |
| (2) CSS X7CQAP-FRO-845-V w/ mount pipe | B | From Face | 3.00 0.00 0.00 | 0.0000 | 135.00 | No Ice | 16.80 | 11.58 | 0.10 |
| (2) CSS X7CQAP-FRO-845-V w/ mount pipe | C | From Face | 3.00 0.00 0.00 | 0.0000 | 135.00 | No Ice | 16.80 | 11.58 | 0.10 |
| (3) Ericsson RRUS-32 TIA-G 12' Platform w/ Handrail ** | C | None | | 0.0000 | 135.00 | No Ice | 3.31 | 2.42 | 0.08 |
| KMW ET-X-UW-68-14-65-18 w/ mount pipe | C | None | | 0.0000 | 135.00 | No Ice | 28.00 | 28.00 | 2.40 |
| KMW ET-X-UW-68-14-65-18 w/ mount pipe | A | From Face | 1.00 0.00 0.00 | 0.0000 | 125.00 | No Ice | 8.39 | 6.29 | 0.06 |
| KMW ET-X-UW-68-14-65-18 w/ mount pipe | B | From Face | 1.00 0.00 0.00 | 0.0000 | 125.00 | No Ice | 8.39 | 6.29 | 0.06 |
| KMW ET-X-UW-68-14-65-18 w/ mount pipe | C | From Face | 1.00 0.00 0.00 | 0.0000 | 125.00 | No Ice | 8.39 | 6.29 | 0.06 |
| (3) Ericsson RRUS-11 | A | From Face | 2.00 0.00 0.00 | 0.0000 | 125.00 | No Ice | 2.55 | 0.92 | 0.05 |
| (3) Ericsson RRUS 12 | B | From Face | 2.00 0.00 0.00 | 0.0000 | 125.00 | No Ice | 3.67 | 1.46 | 0.06 |
| (3) Ericsson RRUS A2 | C | From Face | 2.00 0.00 0.00 | 0.0000 | 125.00 | No Ice | 1.87 | 0.50 | 0.03 |
| (3) Ericsson RRUS-32 | A | From Face | 2.00 0.00 0.00 | 0.0000 | 125.00 | No Ice | 3.31 | 2.42 | 0.08 |
| (3) Raycap DC6-48-60-18-8F Suppressor | B | From Face | 2.00 0.00 0.00 | 0.0000 | 125.00 | No Ice | 1.47 | 1.47 | 0.03 |
| Flush Mount | C | None | | 0.0000 | 125.00 | No Ice | 8.15 | 8.15 | 0.85 |

| | | | | |
|--|----------------|-------------------------------------|--------------------|-------------------|
| tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com | Job | 150-ft Monopole - MFP #23517-765 r1 | Page | 3 of 6 |
| | Project | TC11 Ft. Pierce Orange Ave. | Date | 10:23:51 12/04/17 |
| | Client | TP-15913 | Designed by | Mike |

| Description | Face or Leg | Offset Type | Offsets: | | Azimuth Adjustment | Placement | C _{AA} Front | C _{AA} Side | Weight | |
|---------------------------------------|-------------|-------------|----------|--------|--------------------|-----------|-----------------------|----------------------|--------|------|
| | | | Horz | Vert | | | | | | |
| | | | ft | ft | ° | ft | ft ² | ft ² | K | |
| ** | | | | | | | | | | |
| KMW | A | From Face | 1.00 | 0.0000 | | 115.00 | No Ice | 8.39 | 6.29 | 0.06 |
| ET-X-UW-68-14-65-18 w/ mount pipe | | | 0.00 | | | | | | | |
| KMW | B | From Face | 1.00 | 0.0000 | | 115.00 | No Ice | 8.39 | 6.29 | 0.06 |
| ET-X-UW-68-14-65-18 w/ mount pipe | | | 0.00 | | | | | | | |
| KMW | C | From Face | 1.00 | 0.0000 | | 115.00 | No Ice | 8.39 | 6.29 | 0.06 |
| ET-X-UW-68-14-65-18 w/ mount pipe | | | 0.00 | | | | | | | |
| (3) Ericsson RRUS-11 | A | From Face | 2.00 | 0.0000 | | 115.00 | No Ice | 2.55 | 0.92 | 0.05 |
| | | | 0.00 | | | | | | | |
| (3) Ericsson RRUS 12 | B | From Face | 2.00 | 0.0000 | | 115.00 | No Ice | 3.67 | 1.46 | 0.06 |
| | | | 0.00 | | | | | | | |
| (3) Ericsson RRUS A2 | C | From Face | 2.00 | 0.0000 | | 115.00 | No Ice | 1.87 | 0.50 | 0.03 |
| | | | 0.00 | | | | | | | |
| (3) Ericsson RRUS-32 | A | From Face | 2.00 | 0.0000 | | 115.00 | No Ice | 3.31 | 2.42 | 0.08 |
| | | | 0.00 | | | | | | | |
| (3) Raycap DC6-48-60-18-8F Suppressor | B | From Face | 2.00 | 0.0000 | | 115.00 | No Ice | 1.47 | 1.47 | 0.03 |
| | | | 0.00 | | | | | | | |
| | | | 0.00 | | | | | | | |
| Flush Mount | C | None | | 0.0000 | | 115.00 | No Ice | 8.15 | 8.15 | 0.85 |

Load Combinations

| Comb. No. | Description |
|-----------|------------------------------------|
| 1 | Dead Only |
| 2 | 1.2 Dead+1.6 Wind 0 deg - No Ice |
| 3 | 0.9 Dead+1.6 Wind 0 deg - No Ice |
| 4 | 1.2 Dead+1.6 Wind 90 deg - No Ice |
| 5 | 0.9 Dead+1.6 Wind 90 deg - No Ice |
| 6 | 1.2 Dead+1.6 Wind 180 deg - No Ice |
| 7 | 0.9 Dead+1.6 Wind 180 deg - No Ice |
| 8 | Dead+Wind 0 deg - Service |
| 9 | Dead+Wind 90 deg - Service |
| 10 | Dead+Wind 180 deg - Service |

Maximum Member Forces

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|--------------|----------------|------------------|-----------------|---------|--------------------------|--------------------------|
| L1 | 150 - 125 | Pole | Max Tension | 8 | 0.00 | -0.00 | -0.00 |
| | | | Max. Compression | 1 | -7.25 | 1.35 | 0.79 |
| | | | Max. Mx | 4 | -6.36 | -280.44 | 6.30 |
| | | | Max. My | 2 | -6.31 | -4.49 | 289.31 |
| | | | Max. Vy | 4 | 20.11 | -280.44 | 6.30 |
| | | | Max. Vx | 2 | -20.43 | -4.49 | 289.31 |

| | | | | |
|--|----------------|-------------------------------------|--------------------|-------------------|
| tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com | Job | 150-ft Monopole - MFP #23517-765 r1 | Page | 4 of 6 |
| | Project | TC11 Ft. Pierce Orange Ave. | Date | 10:23:51 12/04/17 |
| | Client | TP-15913 | Designed by | Mike |

| Section No. | Elevation ft | Component Type | Condition | Gov. Load Comb. | Axial K | Major Axis Moment kip-ft | Minor Axis Moment kip-ft |
|-------------|--------------|----------------|------------------|-----------------|---------|--------------------------|--------------------------|
| L2 | 125 - 75 | Pole | Max. Torque | 2 | | | 6.06 |
| | | | Max Tension | 1 | 0.00 | 0.00 | 0.00 |
| | | | Max. Compression | 6 | -19.55 | 18.47 | -1686.24 |
| | | | Max. Mx | 4 | -19.54 | -1682.20 | 18.84 |
| | | | Max. My | 2 | -19.54 | -13.81 | 1691.96 |
| | | | Max. Vy | 4 | 36.01 | -1682.20 | 18.84 |
| | | | Max. Vx | 2 | -35.93 | -13.81 | 1691.96 |
| L3 | 75 - 43.5 | Pole | Max. Torque | 4 | | | 7.02 |
| | | | Max Tension | 1 | 0.00 | 0.00 | 0.00 |
| | | | Max. Compression | 6 | -29.71 | 25.64 | -2858.62 |
| | | | Max. Mx | 4 | -29.71 | -2857.32 | 26.02 |
| | | | Max. My | 2 | -29.71 | -20.70 | 2864.42 |
| | | | Max. Vy | 4 | 40.95 | -2857.32 | 26.02 |
| | | | Max. Vx | 2 | -40.87 | -20.70 | 2864.42 |
| L4 | 43.5 - 0 | Pole | Max. Torque | 4 | | | 6.98 |
| | | | Max Tension | 1 | 0.00 | 0.00 | 0.00 |
| | | | Max. Compression | 6 | -50.79 | 36.91 | -5087.99 |
| | | | Max. Mx | 4 | -50.79 | -5091.19 | 37.30 |
| | | | Max. My | 2 | -50.79 | -31.90 | 5093.85 |
| | | | Max. Vy | 4 | 48.00 | -5091.19 | 37.30 |
| | | | Max. Vx | 2 | -47.91 | -31.90 | 5093.85 |
| | | Max. Torque | 4 | | | 6.96 | |

Maximum Tower Deflections - Service Wind

| Section No. | Elevation ft | Horz. Deflection in | Gov. Load Comb. | Tilt ° | Twist ° |
|-------------|--------------|---------------------|-----------------|--------|---------|
| L1 | 150 - 125 | 16.813 | 8 | 0.9802 | 0.0098 |
| L2 | 125 - 75 | 11.780 | 8 | 0.9107 | 0.0049 |
| L3 | 80.5 - 43.5 | 4.723 | 8 | 0.5665 | 0.0016 |
| L4 | 50 - 0 | 1.799 | 8 | 0.3314 | 0.0007 |

Critical Deflections and Radius of Curvature - Service Wind

| Elevation ft | Appurtenance | Gov. Load Comb. | Deflection in | Tilt ° | Twist ° | Radius of Curvature ft |
|--------------|--|-----------------|---------------|--------|---------|------------------------|
| 145.00 | Nokia FASB Antenna w/ mount pipe | 8 | 15.781 | 0.9710 | 0.0088 | 46557 |
| 135.00 | (2) CSS X7CQAP-FRO-845-V w/ mount pipe | 8 | 13.742 | 0.9479 | 0.0067 | 15519 |
| 125.00 | KMW ET-X-UW-68-14-65-18 w/ mount pipe | 8 | 11.780 | 0.9107 | 0.0050 | 9567 |
| 115.00 | KMW ET-X-UW-68-14-65-18 w/ mount pipe | 8 | 9.940 | 0.8527 | 0.0041 | 8634 |

| | | | | |
|--|----------------|-------------------------------------|--------------------|-------------------|
| tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com | Job | 150-ft Monopole - MFP #23517-765 r1 | Page | 5 of 6 |
| | Project | TC11 Ft. Pierce Orange Ave. | Date | 10:23:51 12/04/17 |
| | Client | TP-15913 | Designed by | Mike |

Maximum Tower Deflections - Design Wind

| Section No. | Elevation ft | Horz. Deflection in | Gov. Load Comb. | Tilt ° | Twist ° |
|-------------|-----------------|------------------------|-----------------|-----------|------------|
| L1 | 150 - 125 | 125.731 | 2 | 7.3065 | 0.0715 |
| L2 | 125 - 75 | 88.258 | 2 | 6.8073 | 0.0359 |
| L3 | 80.5 - 43.5 | 35.478 | 2 | 4.2538 | 0.0117 |
| L4 | 50 - 0 | 13.523 | 2 | 2.4915 | 0.0053 |

Critical Deflections and Radius of Curvature - Design Wind

| Elevation ft | Appurtenance | Gov. Load Comb. | Deflection in | Tilt ° | Twist ° | Radius of Curvature ft |
|-----------------|--|-----------------|------------------|-----------|------------|---------------------------|
| 145.00 | Nokia FASB Antenna w/ mount pipe | 2 | 118.049 | 7.2419 | 0.0671 | 6572 |
| 135.00 | (2) CSS X7CQAP-FRO-845-V w/ mount pipe | 2 | 102.873 | 7.0775 | 0.0514 | 2188 |
| 125.00 | KMW ET-X-UW-68-14-65-18 w/ mount pipe | 2 | 88.258 | 6.8073 | 0.0380 | 1345 |
| 115.00 | KMW ET-X-UW-68-14-65-18 w/ mount pipe | 2 | 74.529 | 6.3807 | 0.0296 | 1202 |

Pole Design Data

| Section No. | Elevation ft | Size | L ft | L _u ft | Kl/r | A in ² | P _u K | φP _n K | Ratio $\frac{P_u}{\phi P_n}$ |
|-------------|-----------------|-----------------------|---------|----------------------|------|----------------------|---------------------|----------------------|---------------------------------|
| L1 | 150 - 125 (1) | TP27.81x22x0.1875 | 25.00 | 0.00 | 0.0 | 16.4388 | -6.31 | 1076.59 | 0.006 |
| L2 | 125 - 75 (2) | TP39.44x27.81x0.3125 | 50.00 | 0.00 | 0.0 | 37.5407 | -19.54 | 2641.85 | 0.007 |
| L3 | 75 - 43.5 (3) | TP46.14x37.5357x0.375 | 37.00 | 0.00 | 0.0 | 52.6726 | -29.71 | 3737.20 | 0.008 |
| L4 | 43.5 - 0 (4) | TP55.5x43.8784x0.4375 | 50.00 | 0.00 | 0.0 | 76.4612 | -50.79 | 5313.23 | 0.010 |

Pole Bending Design Data

| Section No. | Elevation ft | Size | M _{ux} kip-ft | φM _{ux} kip-ft | Ratio $\frac{M_{ux}}{\phi M_{ux}}$ | M _{uy} kip-ft | φM _{uy} kip-ft | Ratio $\frac{M_{uy}}{\phi M_{uy}}$ |
|-------------|-----------------|-----------------------|---------------------------|----------------------------|---------------------------------------|---------------------------|----------------------------|---------------------------------------|
| L1 | 150 - 125 (1) | TP27.81x22x0.1875 | 289.35 | 612.16 | 0.473 | 0.00 | 612.16 | 0.000 |
| L2 | 125 - 75 (2) | TP39.44x27.81x0.3125 | 1692.02 | 2055.30 | 0.823 | 0.00 | 2055.30 | 0.000 |
| L3 | 75 - 43.5 (3) | TP46.14x37.5357x0.375 | 2864.50 | 3398.77 | 0.843 | 0.00 | 3398.77 | 0.000 |
| L4 | 43.5 - 0 (4) | TP55.5x43.8784x0.4375 | 5093.95 | 6015.48 | 0.847 | 0.00 | 6015.48 | 0.000 |

Pole Shear Design Data

| Section No. | Elevation ft | Size | Actual V _u K | φV _n K | Ratio $\frac{V_u}{\phi V_n}$ | Actual T _u kip-ft | φT _n kip-ft | Ratio $\frac{T_u}{\phi T_n}$ |
|-------------|-----------------|-----------------------|----------------------------|----------------------|---------------------------------|---------------------------------|---------------------------|---------------------------------|
| L1 | 150 - 125 (1) | TP27.81x22x0.1875 | 20.43 | 534.98 | 0.038 | 6.06 | 1225.83 | 0.005 |
| L2 | 125 - 75 (2) | TP39.44x27.81x0.3125 | 35.93 | 1320.92 | 0.027 | 6.53 | 4115.62 | 0.002 |
| L3 | 75 - 43.5 (3) | TP46.14x37.5357x0.375 | 40.87 | 1868.60 | 0.022 | 6.50 | 6805.84 | 0.001 |

| | | | | |
|--|----------------|-------------------------------------|--------------------|-------------------|
| tnxTower Michael F. Plahovinsak, P.E. 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com | Job | 150-ft Monopole - MFP #23517-765 r1 | Page | 6 of 6 |
| | Project | TC11 Ft. Pierce Orange Ave. | Date | 10:23:51 12/04/17 |
| | Client | TP-15913 | Designed by | Mike |

| Section No. | Elevation ft | Size | Actual V_u K | ϕV_n K | Ratio $\frac{V_u}{\phi V_n}$ | Actual T_u kip-ft | ϕT_n kip-ft | Ratio $\frac{T_u}{\phi T_n}$ |
|-------------|-----------------|-----------------------|----------------------|-----------------|---------------------------------|---------------------------|----------------------|---------------------------------|
| L4 | 43.5 - 0 (4) | TP55.5x43.8784x0.4375 | 47.91 | 2656.62 | 0.018 | 6.49 | 12045.67 | 0.001 |

Pole Interaction Design Data

| Section No. | Elevation ft | Ratio $\frac{P_u}{\phi P_n}$ | Ratio $\frac{M_{ux}}{\phi M_{nx}}$ | Ratio $\frac{M_{uy}}{\phi M_{ny}}$ | Ratio $\frac{V_u}{\phi V_n}$ | Ratio $\frac{T_u}{\phi T_n}$ | Comb. Stress Ratio | Allow. Stress Ratio | Criteria |
|-------------|-----------------|---------------------------------|---------------------------------------|---------------------------------------|---------------------------------|---------------------------------|--------------------------|---------------------------|----------|
| L1 | 150 - 125 (1) | 0.006 | 0.473 | 0.000 | 0.038 | 0.005 | 0.480 ✓ | 1.000 | 4.8.2 ✓ |
| L2 | 125 - 75 (2) | 0.007 | 0.823 | 0.000 | 0.027 | 0.002 | 0.831 ✓ | 1.000 | 4.8.2 ✓ |
| L3 | 75 - 43.5 (3) | 0.008 | 0.843 | 0.000 | 0.022 | 0.001 | 0.851 ✓ | 1.000 | 4.8.2 ✓ |
| L4 | 43.5 - 0 (4) | 0.010 | 0.847 | 0.000 | 0.018 | 0.001 | 0.857 ✓ | 1.000 | 4.8.2 ✓ |

Section Capacity Table

| Section No. | Elevation ft | Component Type | Size | Critical Element | P K | ϕP_{allow} K | % Capacity | Pass Fail |
|-----------------|-----------------|-------------------|-----------------------|---------------------|--------|-----------------------|---------------|--------------|
| L1 | 150 - 125 | Pole | TP27.81x22x0.1875 | 1 | -6.31 | 1076.59 | 48.0 | Pass |
| L2 | 125 - 75 | Pole | TP39.44x27.81x0.3125 | 2 | -19.54 | 2641.85 | 83.1 | Pass |
| L3 | 75 - 43.5 | Pole | TP46.14x37.5357x0.375 | 3 | -29.71 | 3737.20 | 85.1 | Pass |
| L4 | 43.5 - 0 | Pole | TP55.5x43.8784x0.4375 | 4 | -50.79 | 5313.23 | 85.7 | Pass |
| Summary | | | | | | | | |
| Pole (L4) | | | | | | | 85.7 | Pass |
| RATING = | | | | | | | 85.7 | Pass |

Monopole Flange Connection Calculation

ANSI/TIA-222-G-2

| | | | |
|---------------------------------------|-----------------------------------|------------------------|-------------------------|
| Factored Connection Reactions: | Pole Shape: | Bolts: | Flange Plate: |
| Moment: 289 ft-kips | 18-Sided | (8) 1 dia. A325 Bolts | 1.25 in. x 37 in. Round |
| Shear: 20 kips | Pole Dia. (D_p): | On a 33 in Bolt Circle | f _y = 50 ksi |
| Axial: 6 kips | 27.81 in | | Inner Dia = 25 in |

Bolt Calculation TIA 4.9.6.4 (Combined Shear and Tension)

The following Interaction Equation Shall Be Satisfied:

$$\begin{aligned} \phi &= 0.75 \text{ TIA 4.9.9} \\ I_{\text{bolts}} &= 1089.00 \text{ in}^2 \text{ Momet of Inertia} \\ T_u &= 52.55 \text{ kips Tension Force} \\ P_u &= 53.30 \text{ kips Compressive Force} \\ V_u &= 2.50 \text{ kips Shear Force} \\ \phi R_{nv} &= 28.30 \text{ kips From AISC 7-1} \\ \phi R_{nt} &= 53.00 \text{ kips From AISC 7-2} \end{aligned}$$

$$\left(\frac{V_{ub}}{\phi R_{nv}} \right)^2 + \left(\frac{T_{ub}}{\phi R_{nt}} \right)^2 \leq 1.0$$

$$0.991 < 1.0 \text{ --> OK}$$

Base Plate Calculation According to TIA-222-G

$$\begin{aligned} \phi &= 0.90 \text{ TIA 4.7} \\ M_{PL} &= 138.24 \text{ in-kip Plate Moment} \\ L &= 10.92 \text{ in Section Length} \\ Z &= 4.27 \text{ Plastic Section Modulus} \\ M_P &= 213.32 \text{ in-kip Plastic Moment} \\ \phi M_n &= 191.9871 \text{ in-kip Factored Resistance} \end{aligned}$$

Calculated Moment vs Factored Resistance

$$138.2351 \text{ in-kip} \leq 192 \text{ in-kip}$$

| | |
|---------------------------|--------------|
| Bolts Are Adequate | 99.1% |
| Plate is Adequate | 72.0% |

| | | |
|---|--|----------------------------|
| Michael F. Plahovinsak, P.E. 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 email: mike@mfpeng.com | Job 150-ft monopole - MFP #23517-765 | Page BP-G |
| | Project TC11 Ft. Pierce Orange Ave. | Date 12/4/2017 |
| | Client TAPP TP-15913 | Designed by Mike |

Anchor Rod and Base Plate Calculation

ANSI/TIA-222-G-2

| Factored Base Reactions: | Pole Shape: | Anchor Rods: | Base Plate: |
|--------------------------|--------------------------------------|---------------------------|------------------------|
| Moment: 5094 ft-kips | 18-Sided | (18) 2.25 in. A615 GR. 75 | 2.5 in. x 69 in. Round |
| Shear: 48 kips | Pole Dia. (D_f): | Anchor Rods Evenly Spaced | $f_y = 50$ ksi |
| Axial: 51 kips | 55.50 in | On a 63 in Bolt Circle | |

Anchor Rod Calculation According to TIA-222-G section 4.9.9

- $\phi = 0.80$ TIA 4.9.9
- $I_{bolts} = 8930.25 \text{ in}^2$ Momet of Inertia
- $P_u = 216$ kips Tension Force
- $V_u = 3$ kips Shear Force
- $R_{nt} = 325.00$ kips Nominal Tensile Strength
- $\eta = 0.50$ for detail type (d)

The following Interaction Equation Shall Be Satisfied:

$$\left(\frac{P_u + \frac{V_u}{\eta}}{\phi R_{nt}} \right) \leq 1.0$$

$$0.850 \leq 1$$

Base Plate Calculation According to TIA-222-G

- $\phi = 0.90$ TIA 4.7
- $M_{pL} = 573.4$ in-kip Plate Moment
- $L = 9.7$ in Section Length
- $Z = 15.1$ Plastic Section Modulus
- $M_p = 756.8$ in-kip Plastic Moment
- $\phi M_n = 681.1$ in-kip Factored Resistance

Calculated Moment vs Factored Resistance

$$573.44 \text{ in-kip} \leq 681 \text{ in-kip}$$

| | |
|---------------------------------|--|
| Anchor Rods Are Adequate | 85.0% <input checked="" type="checkbox"/> |
| Base Plate is Adequate | 84.2% <input checked="" type="checkbox"/> |

| | | | | |
|---|---------|----------------------------------|-------------|-----------|
| Michael F. Plahovinsak, P.E. 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 email: mike@mfpeng.com | Job | 150-ft monopole - MFP #23517-765 | Page | FND |
| | Project | TC11 Ft. Pierce Orange Ave. | Date | 12/4/2017 |
| | Client | TAPP TP-15913 | Designed by | Mike |

Caisson Calculation

According to ANSI/TIA-222-G-2

1. Foundation overturning resistance calculated with PLS Caisson, for Brom's method for rigid piles. Soil layers modeled after recommendations from the geotechnical report.
2. Cohesion strength for the upper 21 ft has been reduced by 50%
3. In lieu of a soil resistance factor $f_s = 0.75$ (TIA-9.4.1) an additional safety factor against soil failure of 1.33 has been applied.
4. Foundation is designed with a minimum safety factor resisting overturning of 2.0
5. Foundation has been designed with factored loads per TIA-222-G.
6. Design water table = 2.5 ft below grade

*** PIER PROPERTIES CONCRETE STRENGTH (ksi) = 4.00 STEEL STRENGTH (ksi) = 60.00

DIAMETER (ft) = 7.000 DISTANCE FROM TOP OF PIER TO GROUND LEVEL (ft) = 0.50

| *** SOIL PROPERTIES | LAYER | TYPE | THICKNESS (ft) | DEPTH AT TOP OF LAYER (ft) | DENSITY (pcf) | CU (psf) | KP | PHI (degrees) |
|---------------------|-------|------|----------------|----------------------------|---------------|----------|-------|---------------|
| | 1 | S | 2.50 | 0.00 | 100.0 | | 1.000 | -0.00 |
| | 2 | S | 1.50 | 2.50 | 55.0 | | 1.000 | -0.00 |
| | 3 | S | 9.50 | 4.00 | 55.0 | | 3.537 | 34.00 |
| | 4 | S | 5.00 | 13.50 | 50.0 | | 2.882 | 29.00 |
| | 5 | S | 18.50 | 18.50 | 50.0 | | 2.881 | 28.99 |

*** DESIGN (FACTORED) LOADS AT TOP OF PIER MOMENT (ft-k) = 5660.0 VERTICAL (k) = 51.0 SHEAR (k) = 53.0
ADDITIONAL SAFETY FACTOR AGAINST SOIL FAILURE = 1.33

*** CALCULATED PIER LENGTH (ft) = 29.000

*** CHECK OF SOILS PROPERTIES AND ULTIMATE RESISTING FORCES ALONG PIER

| TYPE | TOP OF LAYER BELOW TOP OF PIER (ft) | THICKNESS (ft) | DENSITY (pcf) | CU (psf) | KP | FORCE (k) | ARM (ft) |
|------|-------------------------------------|----------------|---------------|----------|-------|-----------|----------|
| S | 0.50 | 2.50 | 100.0 | | 1.000 | 6.56 | 2.17 |
| S | 3.00 | 1.50 | 55.0 | | 1.000 | 9.17 | 3.79 |
| S | 4.50 | 9.50 | 55.0 | | 3.537 | 418.97 | 9.95 |
| S | 14.00 | 5.00 | 50.0 | | 2.882 | 296.56 | 16.61 |
| S | 19.00 | 1.16 | 50.0 | | 2.881 | 79.87 | 19.59 |
| S | 20.16 | 8.84 | 50.0 | | 2.881 | -739.92 | 24.82 |

*** SHEAR AND MOMENTS ALONG PIER

| DISTANCE BELOW TOP OF PIER (ft) | WITH THE ADDITIONAL SAFETY FACTOR | | | WITHOUT ADDITIONAL SAFETY FACTOR | | |
|---------------------------------|-----------------------------------|---------------|--|----------------------------------|---------------|--|
| | SHEAR (k) | MOMENT (ft-k) | | SHEAR (k) | MOMENT (ft-k) | |
| 0.00 | 71.2 | 7657.1 | | 53.4 | 5742.9 | |
| 2.90 | 65.2 | 7858.8 | | 48.9 | 5894.1 | |
| 5.80 | 19.9 | 8005.5 | | 14.9 | 6004.1 | |
| 8.70 | -84.3 | 7920.5 | | -63.2 | 5940.4 | |
| 11.60 | -222.8 | 7483.5 | | -167.1 | 5612.6 | |
| 14.50 | -389.7 | 6596.3 | | -292.3 | 4947.2 | |
| 17.40 | -556.9 | 5229.8 | | -417.7 | 3922.4 | |
| 20.30 | -730.3 | 3342.9 | | -547.7 | 2507.2 | |
| 23.20 | -512.3 | 1534.9 | | -384.2 | 1151.2 | |
| 26.10 | -268.9 | 396.0 | | -201.7 | 297.0 | |
| 29.00 | -0.0 | -0.0 | | -0.0 | -0.0 | |

*** TOTAL REINFORCEMENT PCT = 0.72 REINFORCEMENT AREA (in²) = 39.90
*** USABLE AXIAL CAP. (k) = 51.0 USABLE MOMENT CAP. (ft-k) = 6005.3

For Design:

7-ft Diameter caisson x 32.5-ft long (32-ft Embedded with 0.5-ft above grade)
Concrete strength = 4000 PSI @ 28 days. Estimated Concrete Volume = 46 CY3.
(34) #10 Vertical Rebar. Steel Cross-Section = 43.18 in²

A2P0227A
Ft Pierce- Orange Ave
Wireless Telecommunication
Facility

Radio Frequency (RF) Engineering Report

| | |
|-----------------|------------|
| Last Updated | 11/28/2017 |
| Revision Number | V1.0 |

Table of Contents

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| Current Cell Site Coverage and Predicted Improvements..... | 5 |
| Certification Statement of Non-interference | 6 |

Search Ring Area

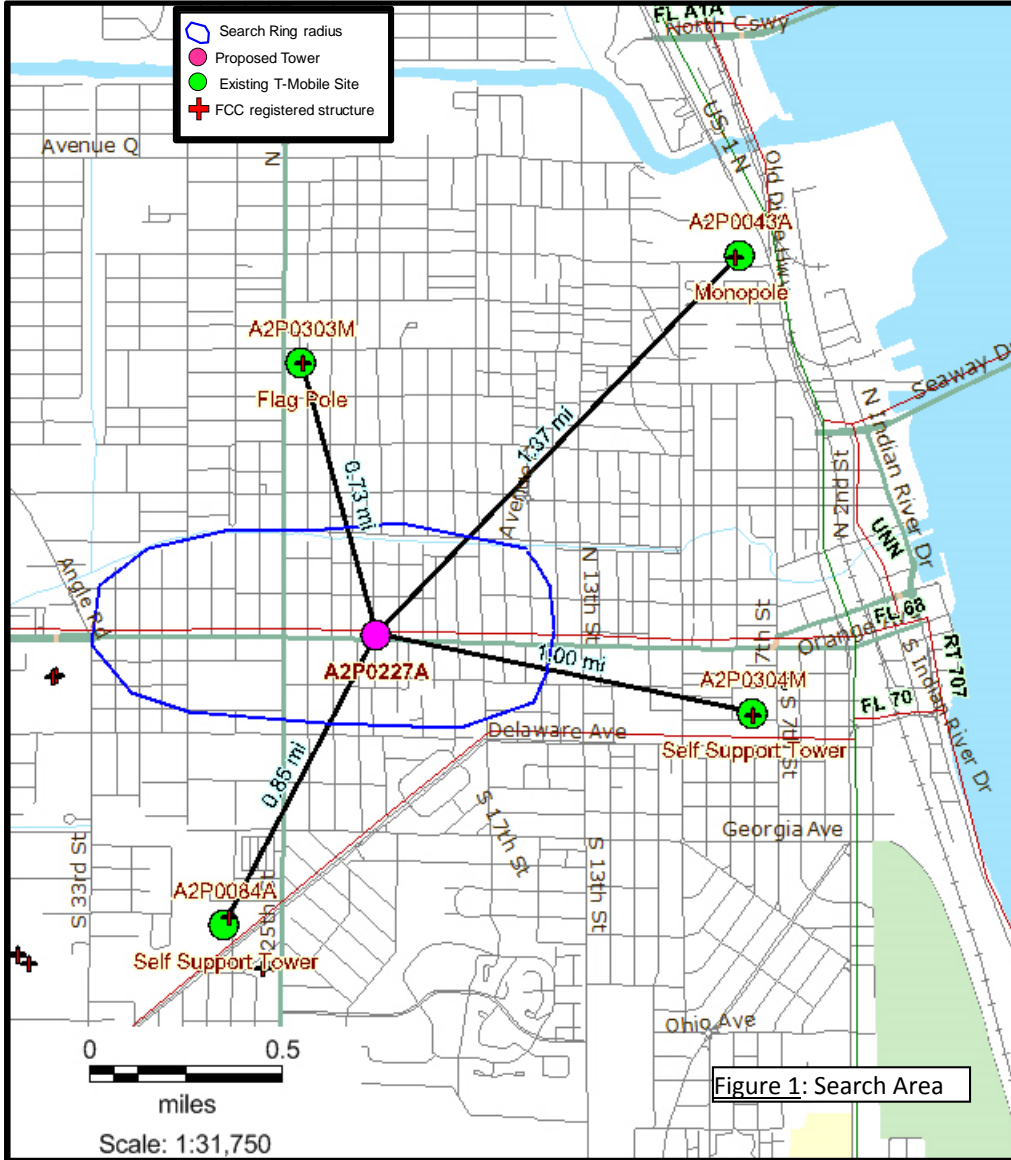


Figure 1: Search Area

As part of T-Mobile’s commitment to improve service in the south Florida market a number of “search rings” have been issued to address coverage deficiencies in the cellular network. Each search ring is in an area where service levels are inadequate to provide the necessary cell phone coverage or capacity. Within the search ring existing towers or structures of sufficient height are sought with the goal of deploying radio transceivers and antennas to improve the local area service levels.

Due to the dramatic increase in cell phone traffic and the popularity of wireless data applications over the last few years, significant demands have been placed on network coverage and capacity. One such area in need of improved services is in the city of Ft Pierce from Canal Terrace in the north to Havana Ave in the south and from S 25th St in the west to 13th St in the east. Coverage levels are too low to support the capacity and coverage needs for this part of the network. Users placing calls indoors and especially during network busy hours may experience dropped calls, ineffective network attempts and slow data application speeds. In the worst-case a user may not be able to place a E911 call.

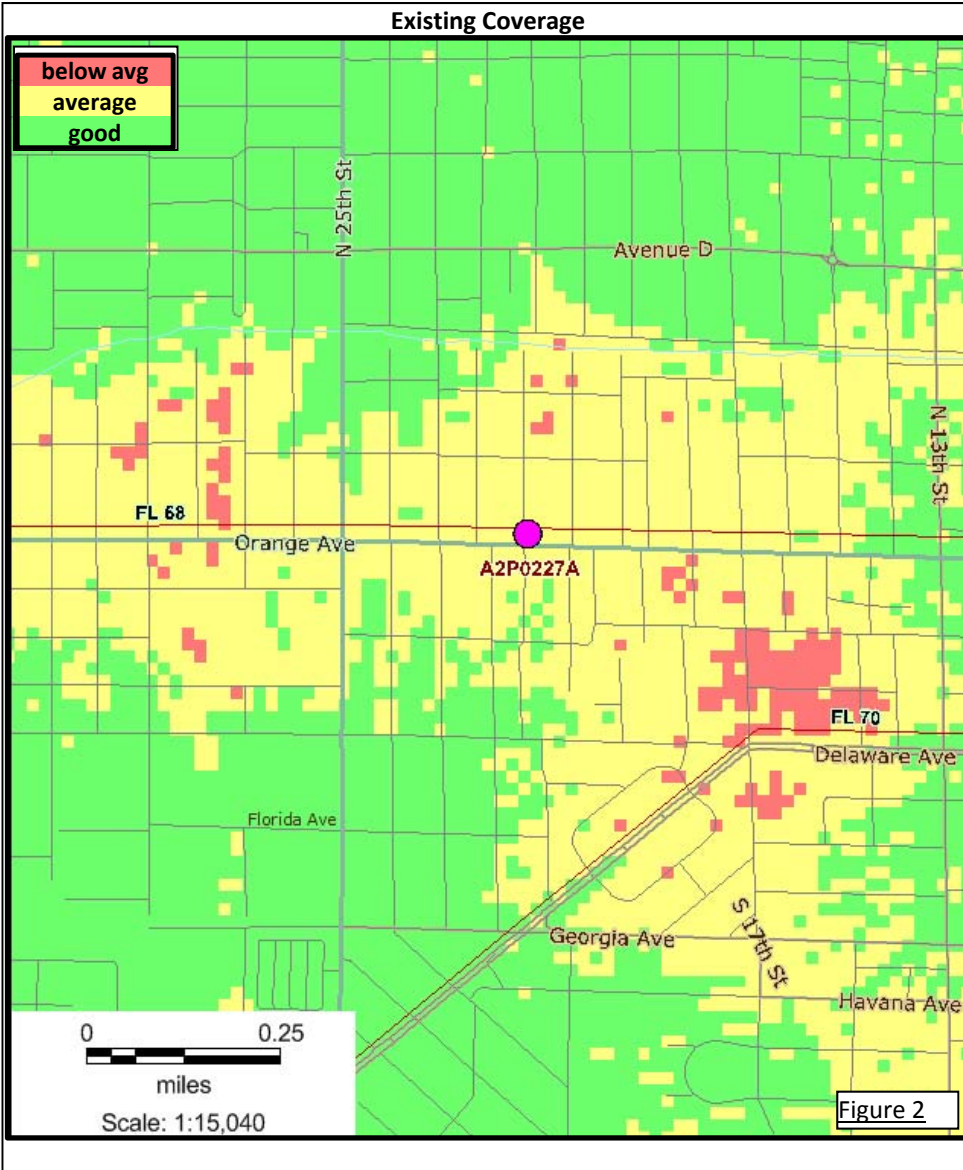
There were no towers or structures of sufficient height within the T-Mobile search area that could accommodate the addition of new facility that would provide an adequate coverage improvement. The surrounding facilities have undergone extensive upgrades over the last decade with no appreciable improvement in service levels in the area of concern.

Shown above in Figure 1 is the T-Mobile search ring and the proposed location surrounded by existing T-Mobile cellular facilities (“cell sites”).

| Site_ID | Site_Name | Site_Class_Desc | Antenna Elevation (ft) | Address | City | Distance (mi) |
|----------|-------------------|--------------------|------------------------|--------------------|-------------|---------------|
| A2P0303M | FT. PIERCE FL1512 | Flag Pole | 145 | 910 N. 25th Street | Fort Pierce | 0.7 |
| A2P0084A | SBA 27TH STREET | Self Support Tower | 140 | 111 S. 27th Street | Ft. Pierce | 0.9 |
| A2P0304M | Crown Citrus Ave | Self Support Tower | 120 | 712 Citrus Ave. | Fort Pierce | 1.0 |
| A2P0043A | Crown | Monopole | 180 | 710 Avenue M | Fort Pierce | 1.4 |

Current Cell Site Coverage and Predicted Improvements

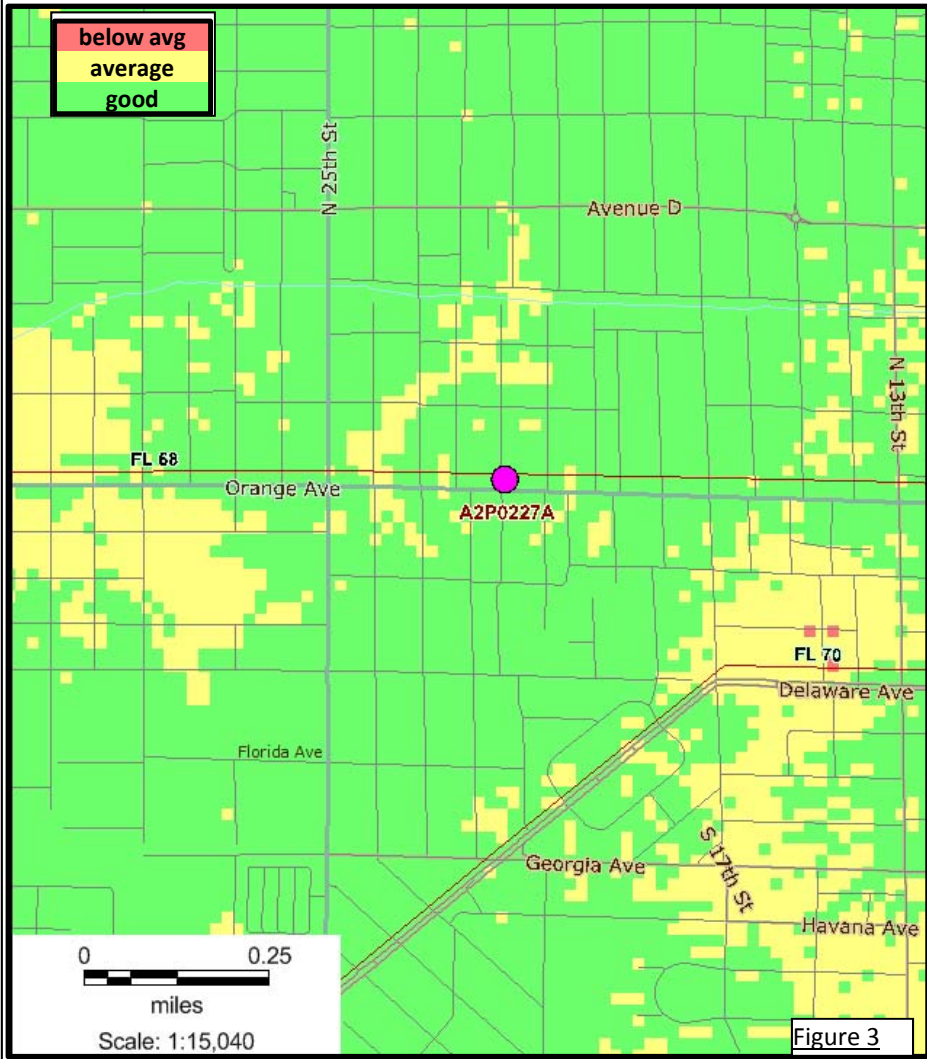
| Good (reliable indoor service) | Average (reliable outdoor service) | below average (poor service) |
|--|---|---|
| Signal power levels able to support a wide range of wireless services both indoors and outdoors. These services include voice calls and high speed data. | Users may experience call quality issues depending on the signal power levels at their specific location. These issues could include dropped calls, ineffective attempts (blocked calls) or slow data speeds. Service in outdoor locations would be markedly better than indoors in many instances. | A user would encounter call quality issues especially indoors or during network busy hours due to low signal power levels. These issues could include dropped calls, ineffective attempts (blocked calls) and slow data speeds. Service may only be available in outdoor locations. In the worst case a user may not be able to place an emergency (E911) call. |



As part of T-Mobile’s design and development process a number of engineering studies are completed to ensure a best-fit approach for cell site additions in the network. Propagation or prediction plots are one of the most important of these and are used extensively to determine if a new proposal is adequate.

In Figure 2 the cell site propagation is shown as shades of color which represent signal power levels that a user would experience at a particular location. The propagation model is based on a predictive computer simulator application that is derived from proprietary methodologies. Green areas indicate signal power levels able to support a wide range of wireless services both indoors and outdoors. These services include voice calls and high speed data. The yellow color indicates areas where a user may experience call quality issues due to inconsistent signal power levels. This may depend on their specific location. For instance, a person may be able to use the cell phone on one side of their house near a window but unable to connect in another part of the house. The red areas represent where a user would encounter call quality issues due to low or unusable signal power levels. This would be especially true indoors or during network busy hours. These issues could include dropped calls, ineffective attempts and slow data speeds. In the worst case a user may not be able to place an emergency (E911) call.

Predicted Coverage with New Facility



The propagation map shown in Figure 3 depicts the predicted signal power levels for the proposed tower when added to the existing network. As can be seen almost all the residential areas have a minimum of average service levels. This is especially important for users who are transitioning from one geographic area to another due to a more consistent coverage overlay. Users indoors will also benefit tremendously due to the closer proximity to the antenna locations. Areas where below average signal power levels still exist can sometimes be alleviated through network optimization methods after the new site comes on line. (These processes are iterative and require a more medium to long term engineering approach)

In summary, T-Mobile has recognized the demand for advanced telecommunication services in these communities. The existing T-Mobile facilities cannot provide these services through upgrade or expansion, due to the distances from the existing tower facilities and cell phone users in this area. Further, no towers or structures of sufficient height were identified in the search ring that could provide the necessary improvements to the network coverage.

These propagation maps graphically demonstrate T-Mobile's business needs based upon existing and predicted customer demands. T-Mobile's goal is to provide reliable wireless service in the areas shown as defined by proprietary QOS (Quality of Service) design parameters.

Certification Statement of Non-interference

This letter provides information about the proposed T-Mobile transceiving equipment on the proposed facility at 2006 Orange Ave, Ft Peirce and its potential interference with communication facilities located nearby; as well as the FCC rules governing the human exposure to radio frequency energy (OET 65 guidelines). T-Mobile shall comply with all FCC rules regarding interference to other radio services and T-Mobile shall comply with all FCC rules regarding human exposure to radio frequency energy. The proposed tower facilities, and reception and transmission functions will not interfere with the visual and customary transmission or reception of radio, television or similar services as well as other wireless services enjoyed by surrounding properties.

T-Mobile radio signals are transmitted on exclusively assigned channels within the E, F and C bands in the PCS spectrum and the D, E, F1 and F2 in the AWS spectrum and A Band in 700MHz. In the future AWS-3 Block H and B, C and D blocks in 600 MHz will be active. The Federal Communication Commission (FCC) has allocated these frequencies exclusively for use by cellular service providers. Each cellular service provider is assigned specific frequencies (channels) on which to transmit and receive radio signals.

Cellular transmitters must be type-accepted by the FCC to ensure compliance with technical standards that limit the frequencies, output power, radio frequency emissions, spurious radio noise and other technical parameters. Cellular licensees like T-Mobile owns are required to use type-accepted equipment. The assignment of frequencies and FCC rules keep cellular radio signals from interfering with or being interfered with by other radio transmissions and provide guidelines outlining the limits for permissible human RF exposure. In the event of a complaint of interference or other concerns about cellular antenna facilities, the FCC has a resolution process to determine the source of interference and whether a facility is in compliance with FCC rules.

In the event of interference or other known issues with the transmission facility contact with the T-Mobile Network Operations Center (NOC) can be established 24 hours a day, 7 days a week 365/366 days per year at the following numbers: (877) 611-5868 (DAY), (877) 611-5868 (NIGHT)

Name Patrick Keane

Title T-Mobile RF Engineer



Signature _____

7017 0190 0000 0262 7657

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BOCA RATON, FL 33431

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| Certified Mail Fee | \$3.35 | 0420 |
| \$ | | 16 |
| Extra Services & Fees (check box, add fee as appropriate) | \$0.00 | |
| <input type="checkbox"/> Return Receipt (hardcopy) | \$0.00 | |
| <input type="checkbox"/> Return Receipt (electronic) | \$0.00 | |
| <input type="checkbox"/> Certified Mail Restricted Delivery | \$0.00 | |
| <input type="checkbox"/> Adult Signature Required | \$0.00 | |
| <input type="checkbox"/> Adult Signature Restricted Delivery | \$0.00 | |
| Postage | \$0.49 | |
| \$ | | |
| Total Postage and Fees | \$3.84 | 10/19/2017 |
| \$ | | |

Sent To: **Mark Baesch**
 Street and Apt. No., or PO Box No.: **4700 Exchange Ct Ste 100**
 City, State, ZIP+4®: **Boca Raton FL 33431**

PS Form 3800, April 2015 PSN 7530-02-000-9047. See Reverse for Instructions

7017 0190 0000 0262 7671

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FORT LAUDERDALE, FL 33309

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| | | |
|--|--------|------------|
| Certified Mail Fee | \$3.35 | 0420 |
| \$ | | 16 |
| Extra Services & Fees (check box, add fee as appropriate) | \$0.00 | |
| <input type="checkbox"/> Return Receipt (hardcopy) | \$0.00 | |
| <input type="checkbox"/> Return Receipt (electronic) | \$0.00 | |
| <input type="checkbox"/> Certified Mail Restricted Delivery | \$0.00 | |
| <input type="checkbox"/> Adult Signature Required | \$0.00 | |
| <input type="checkbox"/> Adult Signature Restricted Delivery | \$0.00 | |
| Postage | \$0.49 | |
| \$ | | |
| Total Postage and Fees | \$3.84 | 10/19/2017 |
| \$ | | |

Sent To: **Matt Spiak**
 Street and Apt. No., or PO Box No.: **6700 N Andrews Ave Ste 700**
 City, State, ZIP+4®: **Fort Lauderdale FL 33309**

PS Form 3800, April 2015 PSN 7530-02-000-9047. See Reverse for Instructions

7017 0190 0000 0262 7640

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LAKE MARY, FL 32746

OFFICIAL USE

| | | |
|--|--------|------------|
| Certified Mail Fee | \$3.35 | 0420 |
| \$ | | 16 |
| Extra Services & Fees (check box, add fee as appropriate) | \$0.00 | |
| <input type="checkbox"/> Return Receipt (hardcopy) | \$0.00 | |
| <input type="checkbox"/> Return Receipt (electronic) | \$0.00 | |
| <input type="checkbox"/> Certified Mail Restricted Delivery | \$0.00 | |
| <input type="checkbox"/> Adult Signature Required | \$0.00 | |
| <input type="checkbox"/> Adult Signature Restricted Delivery | \$0.00 | |
| Postage | \$0.49 | |
| \$ | | |
| Total Postage and Fees | \$3.84 | 10/19/2017 |
| \$ | | |

Sent To: **Connie Chapman**
 Street and Apt. No., or PO Box No.: **3210 Lake Emma Rd**
 City, State, ZIP+4®: **Lake Mary FL 32746**

PS Form 3800, April 2015 PSN 7530-02-000-9047. See Reverse for Instructions



RG Towers, LLC

10/20/17

RE: RG Towers-Ft Pierce- Orange Ave Lighting Plan- Section 22-58-D.8

There is no proposed lighting at the proposed development and hence section 22.58.D.8 below is not applicable

(8)

A lighting plan which shows illumination of all interior and immediately adjoining streets as follows:

a.

At least one (1) average footcandle for streets classified as collector classified as collector, arterial or higher;

b.

At least five-tenths average footcandle for streets other than as described in the immediately foregoing subsection;

c.

At least one (1) average footcandle for specially designated pedestrian walkways.

The uniformity ratio for lighting required by this section shall be an average/minimum ratio of ten (10) to one (1). There shall be included with the lighting plan a statement of a registered engineer or architect showing calculations demonstrating compliance with this section to the city engineer and such statement shall be subject to the city engineers approval. Subsequently a certificate of occupancy may not be issued until there is filed with the director a certificate from a registered engineer or architect of design that the lighting installation meets the requirements of this section.

Sincerely,

Holly Valdez
V.P. Operations
RG Towers, LLC



RG Towers, LLC

10/20/17

RE: RG Towers-FT Pierce Orange Ave Beach Dune Protection Plan- Section 22-58-D.7

The proposed development is greater than three miles to the beach and hence section 22.58.D.7 below is not applicable

(7)

A plan providing, where applicable, for the protection of the beach and dune system. The plan shall include these requirements:

a.

Demonstration of compliance with the coastal construction control line established pursuant to Chapter 161, Florida Statutes;

b.

All beach access points are to be provided as beach/dune walkovers in accordance with the requirements of the Florida Department of Natural Resources;

c.

No construction which threatens the stability of the primary dune or beach itself shall be permitted;

d.

No rigid shore protection structures shall be permitted except when used as part of a comprehensive plan for beach restoration and when nonstructural alternatives are unavailable;

e.

Demonstration of dune restoration measures conforming to the requirements of the Florida Department of Natural Resources.

Sincerely,

Holly Valdez
V.P. Operations
RG Towers, LLC

ORANGE AVENUE

PARENT TRACT

(PER OFFICIAL RECORD BOOK 3822, PAGE 1761 OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA)

LOTS 3, 4 AND 5, LESS THE SOUTH 15 FEET THEREOF, BLOCK 3 OF FLORIANA PARK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 2, PAGE 7C, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

RG TOWERS LEASE PARCEL

A PARCEL OF LAND BEING A PORTION OF LOT 5, BLOCK 3, FLORIANA PARK, AS RECORDED IN PLAT BOOK 2, PAGE 7C OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID LOT 5, BLOCK 3;

THENCE ON A GRID BEARING OF S88°19'00"E ALONG THE NORTH LINE OF LOT 5, BLOCK 3, A DISTANCE OF 19.52 FEET;

THENCE S01°41'00"W A DISTANCE OF 15.00 FEET TO A POINT ON A LINE 15.00 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID LOT 5, BLOCK 3, SAID POINT ALSO BEING THE POINT OF BEGINNING;

THENCE S88°19'00"E ALONG SAID PARALLEL LINE, A DISTANCE OF 25.01 FEET;

THENCE S00°16'00"E A DISTANCE OF 79.98 FEET TO A POINT ON A LINE 25.00 FEET NORTH OF AND PARALLEL WITH THE NORTH RIGHT-OF-WAY LINE OF ORANGE AVENUE (80 FOOT PUBLIC RIGHT-OF-WAY);

THENCE N88°19'00"W ALONG SAID PARALLEL LINE, A DISTANCE OF 25.01 FEET TO A POINT ON A LINE 19.00 FEET EAST OF AND PARALLEL WITH THE WEST LINE OF SAID LOT 5, BLOCK 3;

THENCE N00°16'00"W ALONG SAID PARALLEL LINE, A DISTANCE OF 79.98 FEET TO THE POINT OF BEGINNING;

SAID PARCEL OF LAND SITUATE WITHIN ST. LUCIE COUNTY, FLORIDA CONTAINING 1,999.47 SQUARE FEET MORE OR LESS.

NON-EXCLUSIVE ACCESS AND UTILITY EASEMENT

A PARCEL OF LAND BEING A PORTION OF LOT 5, BLOCK 3, FLORIANA PARK, AS RECORDED IN PLAT BOOK 2, PAGE 7C OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID LOT 5, BLOCK 3;

THENCE ON A GRID BEARING OF S88°19'00"E ALONG THE NORTH LINE OF LOT 5, BLOCK 3, A DISTANCE OF 19.52 FEET;

THENCE S01°41'00"W A DISTANCE OF 15.00 FEET TO A POINT ON A LINE 15.00 FEET SOUTH OF AND PARALLEL WITH THE NORTH LINE OF SAID LOT 5, BLOCK 3;

THENCE S88°19'00"E ALONG SAID PARALLEL LINE, A DISTANCE OF 25.01 FEET;

THENCE S00°16'00"E A DISTANCE OF 79.98 FEET TO A POINT ON A LINE 25.00 FEET NORTH OF AND PARALLEL WITH THE NORTH RIGHT-OF-WAY LINE OF ORANGE AVENUE (80 FOOT PUBLIC RIGHT-OF-WAY);

THENCE N88°19'00"W ALONG SAID PARALLEL LINE, A DISTANCE OF 25.01 FEET TO A POINT ON A LINE 19.00 FEET EAST OF AND PARALLEL WITH THE WEST LINE OF SAID LOT 5, BLOCK 3;

THENCE N00°16'00"W ALONG SAID PARALLEL LINE, A DISTANCE OF 29.99 FEET TO THE POINT OF BEGINNING;

THENCE S89°44'00"W A DISTANCE OF 19.00 FEET TO A POINT ON THE WEST LINE OF SAID LOT 5, BLOCK 3, SAID POINT ALSO BEING ON THE EAST RIGHT-OF-WAY LINE OF NORTH 21ST STREET (60 FOOT PUBLIC RIGHT-OF-WAY);

THENCE N00°16'00"W ALONG SAID WEST LINE AND EAST RIGHT-OF-WAY LINE, A DISTANCE OF 20.00 FEET;

THENCE N89°44'00"E A DISTANCE OF 19.00 FEET;

THENCE S00°16'00"E A DISTANCE OF 20.00 FEET TO THE POINT OF BEGINNING;

SAID PARCEL OF LAND SITUATE WITHIN ST. LUCIE COUNTY, FLORIDA CONTAINING 380.00 SQUARE FEET MORE OR LESS.



Ft Pierce Planning and Zoning
100 N. U.S. Highway 1
Fort Pierce, FL 34950

12/12/17

RE: RG Towers - Ft Pierce- Orange Ave Design Review Application Checklist- Section i. Accurate color rendering of proposed signs showing dimensions, type of lettering, materials and actual color samples that demonstrates cohesiveness with the project design.

Please allow the photograph below to represent the signage proposed for our proposed new communication tower to be located at 2006 Orange Ave.



Please let me know if you have any questions.

Sincerely

Holly Valdez
V.P. Operations
RG Towers LLC



RG Towers, LLC

Ft Pierce Planning and Zoning
100 N. U.S. Highway 1
Fort Pierce, FL 34950

12-12-17

RE: RG Towers - Ft Pierce Orange Ave Design Review Section f. Photographs of all existing structures located on the property. If existing structures on the property are more than fifty (50) years of age, documentation of these structures with data from the Florida Master Site File form is also required.





Please let me know if you have any questions.

Sincerely,

Holly Valdez

Holly Valdez
RG Towers, LLC
V.P. Operations

2141 Alternate A1A South, Suite 440
Jupiter, FL 33477
Phone: 561-748-0302 Fax: 561-748-0303 Web: www.rgtowers.com

Ft Pierce Planning and Zoning
 100 N. U.S. Highway 1
 Fort Pierce, FL 34950

RE: RG Towers - Ft Pierce- Orange Ave Design Review Application Checklist- Section e.

Please allow the photographs below to serve as a precedent for the proposed building design of the new proposed communication tower to be located at Orange Ave. These are all local towers within two miles of the proposed area of development.

| Str Reg # | Tower Owner | Distance | Type | Colocations | Height | Address |
|------------------|-----------------------------------|-----------------|-------------|--------------------|---------------|--|
| 1270020 | American Towers, LLC. | 0.79 | flagpole | flagpole | 150ft | Fl1512 Ft. Pierce - 910 N 25th St Structure City: Fort Pierce, FL |
| 1028726 | BellSouth Telecommunications, LLC | 1.03 | rooftop | rooftop | 141ft | 712 Citrus Ave Structure City: Fort Pierce, FL |
| 1027499 | FLORIDA POWER & LIGHT COMPANY | 0.86 | guyed | 3 | 300ft | South 33rd Street At Hwy 68 Structure City: Fort Pierce, FL |
| 1227259 | Crown Communication LLC | 1.43 | monopole | 3 | 191ft | 710 Ave "m Structure City: Fort Pierce, FL |
| 1036166 | SBA Properties, LLC | 0.77 | SST | 2 or 3 | 350ft | St. Lucie County Structure City: Ft. Pierce, FL |
| 1203992 | Daves Communications Inc | 0.9 | granted | granted | 161ft | 2530 Okeechobee Rd Structure City: Ft. Pierce, FL |
| 1257640 | American Towers, LLC | 1.18 | unipole | unipole | 205ft | 37th Street (#75126-shielded) Structure City: Ft. Pierce, FL |
| 1035334 | r INDIAN RIVER STATE COLLEGE | 1.85 | SST | 2 | 500 | 3209 Virginia Avenue Structure City: Ft. Pierce, FL |

1270020



1028726



1027499



1227259



1036166



1203992



1257640



1035334



RG Towers, LLC built a monopole tower located at 2551 Jenkins Rd, Ft Pierce FL 34947 in 2016. We are seeking to develop the same here at 2006 Orange Ave.

1297991



Please let me know if you have any questions.

Sincerely

Holly Valdez
V.P. Operations
RG Towers LLC



RG Towers, LLC

Ft Pierce Planning and Zoning
100 N. U.S. Highway 1
Fort Pierce, FL 34950

12-12-17

RE: RG Towers - Ft Pierce Orange Ave Design Review Section D Context photographs of neighboring uses and architectural styles.





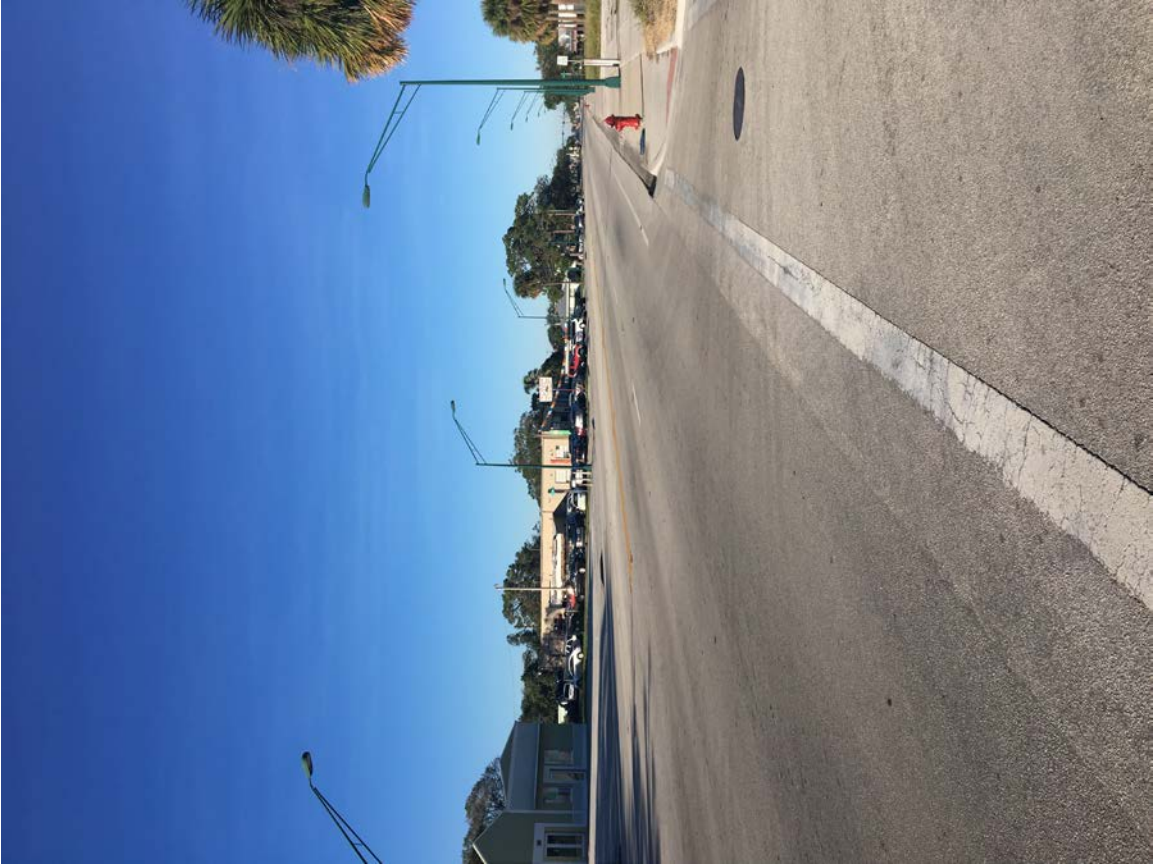
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Please let me know if you have any questions.

Sincerely,

Holly Valdez
RG Towers, LLC
V.P. Operations

2141 Alternate A1A South, Suite 440
Jupiter, FL 33477
Phone: 561-748-0302 Fax: 561-748-0303 Web: www.rgtowers.com



RG Towers, LLC

Ft Pierce Planning and Zoning
100 N. U.S. Highway 1
Fort Pierce, FL 34950

12-12-17

RE: RG Towers - Ft Pierce Orange Ave Design Review Section c. A draft written narrative describing the design intent of the project, its goals and objectives and how it reflects the site analysis study results.

Coverage levels in this area are too low to support the capacity and coverage needs for this part of T-Mobile’s network. Users placing calls indoors and especially during network busy hours may experience dropped calls, ineffective network attempts and slow data application speeds. In the worst-case a user may not be able to place a E911 call. For this reason RG Towers, LLC is applying for approval to build a 150’ communications tower at the location shown below.

Tower Height/Type 150’ Monopole
Address 2006 Orange Ave, Ft Pierce FL 34950
Coordinates Approximately 27.447636, -80.345960

The parcel is currently owned by Lesley Phillips and Abdel Jebbar Elbakkari. RG Towers, LLC entered into a Lease Agreement dated 9/27/17.

The character of this undeveloped parcel is commercial with no existing vegetation in the proposed lease area and is among primarily commercial zones as seen in the attached photographs. The surrounding zones are as follows;

| <u>ADJACENT ZONING CLASSIFICATIONS</u> | <u>ZONING/LAND USE CLASSIFICATION</u> |
|--|---------------------------------------|
| ZONING TO EAST | C-3/GENERAL COMMERCIAL |
| ZONING TO SOUTH | C-3/GENERAL COMMERCIAL |
| ZONING TO WEST | C-3/GENERAL COMMERCIAL |
| ZONING TO NORTH | R3/SINGLE FAMILY MODERATE DENSITY |

The intended use will be the development of a 150’ monopole communication tower with a 6’ wooden fenced compound to enclose the auxiliary equipment. The fenced compound will be

landscaped per the code to include 7 live oaks and 69 podocarpus. In addition to the fencing and landscaping, RG Towers will install a concrete apron access off N. 21st Street and install a 5' sidewalk per the City of Ft Pierce standards.

This is to be an unmanned facility with only semiannual visits for maintenance outside of initial construction.



Please let me know if you have any questions.

Sincerely,

Holly Valdez
RG Towers, LLC
V.P. Operations