



BERTHA W. HENRY, County Administrator

115 S. Andrews Avenue, Room 409 • Fort Lauderdale, Florida 33301 • 954-357-7362 • FAX 954-357-7360

April 25, 2017

Michael C. Cernech, City Manager
City of Tamarac
7525 NW 88th Avenue
Tamarac, Florida 33321-2401

Dear Mr. Cernech:

Subject: Radio Tower Sites in the City of Tamarac

As you are aware, Broward County has embarked on the replacement of its 25-year old radio communication network with a more state of the art digital system that allows for future expansion to accommodate the growing population of our County. The design and location of tower sites were selected to ensure that we achieved the requirements for optimal coverage.

County staff has worked with you and your staff on reviewing alternate tower sites and heights proposed by the City of Tamarac. Unfortunately, they do not meet the specifications needed.

Based on the radio coverage analysis that was performed by Mission Critical Partners, the ideal location for the radio tower sites are listed below, and a copy of a presentation that was previously given to City officials is attached:

1. City of Tamarac Police Station at 7515 NW 88th Avenue
or
2. Ball Park – Tamarac Recreation Center at 7501 N University Dr.

A tower site is needed to properly cover the City of Tamarac. The following are some specifics of the tower sites:

- 300 ft. high towers are desired for optimal system performance for Tamarac and surrounding users
- Top mounted candelabra for multiple antennas
- 325 ft. total height with antennas
- Lattice self-supporting tower for capacity
- Equipment shelter at tower base

We are in negotiations with Motorola Solutions, Inc. on a contract for the replacement of the existing radio system. Once this contract is finalized and approved by the Board of County Commissioners, we will be finalizing the technical designs, radio tower sites, and implementation timeline for the new radio system; thus, time is of essence.

Broward County Board of County Commissioners
Mark D. Bogen • Beam Furr • Steve Geller • Dale V.C. Holness • Chip LaMarca • Nan H. Rich • Tim Ryan • Barbara Sharief • Michael Udine
www.broward.org

Michael C. Cernech, City Manager
City of Tamarac
Radio Tower Sites
April 12, 2017

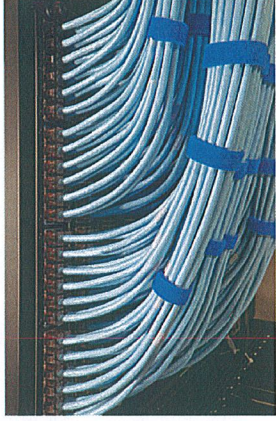
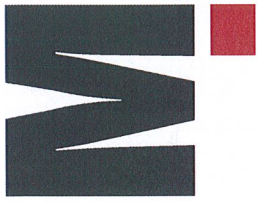
We look forward to working with the City of Tamarac on the necessary tower site. If you have any questions, please contact me or Alphonso Jefferson, Jr., Assistant County Administrator at 954-357-7352 or via email at ajefferson@broward.org.

Sincerely,

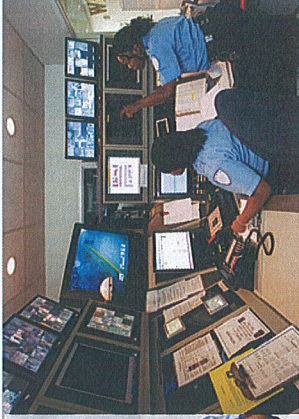
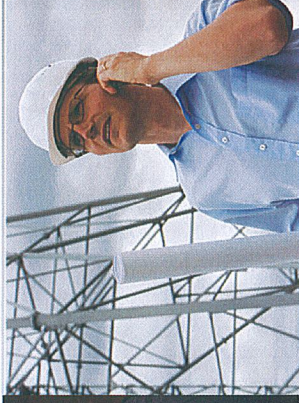

Bertha Henry
County Administrator

Attachment

cc: Broward County Board of County Commissioners
Alphonso Jefferson, Jr., Assistant County Administrator
Brett Bayag, Acting Director, Office of Regional Communications and Technology



Mission Critical Partners



Committed to Earning Your TRUST

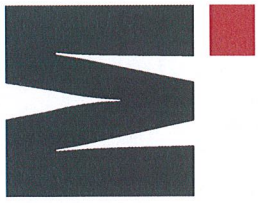
Broward County/City of Tamarac

Public Safety Radio Tower

Your Life Safety Mission Is Our Passion

Public Safety Communication Consultants

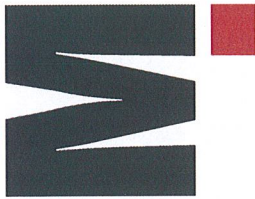
MCP911.COM



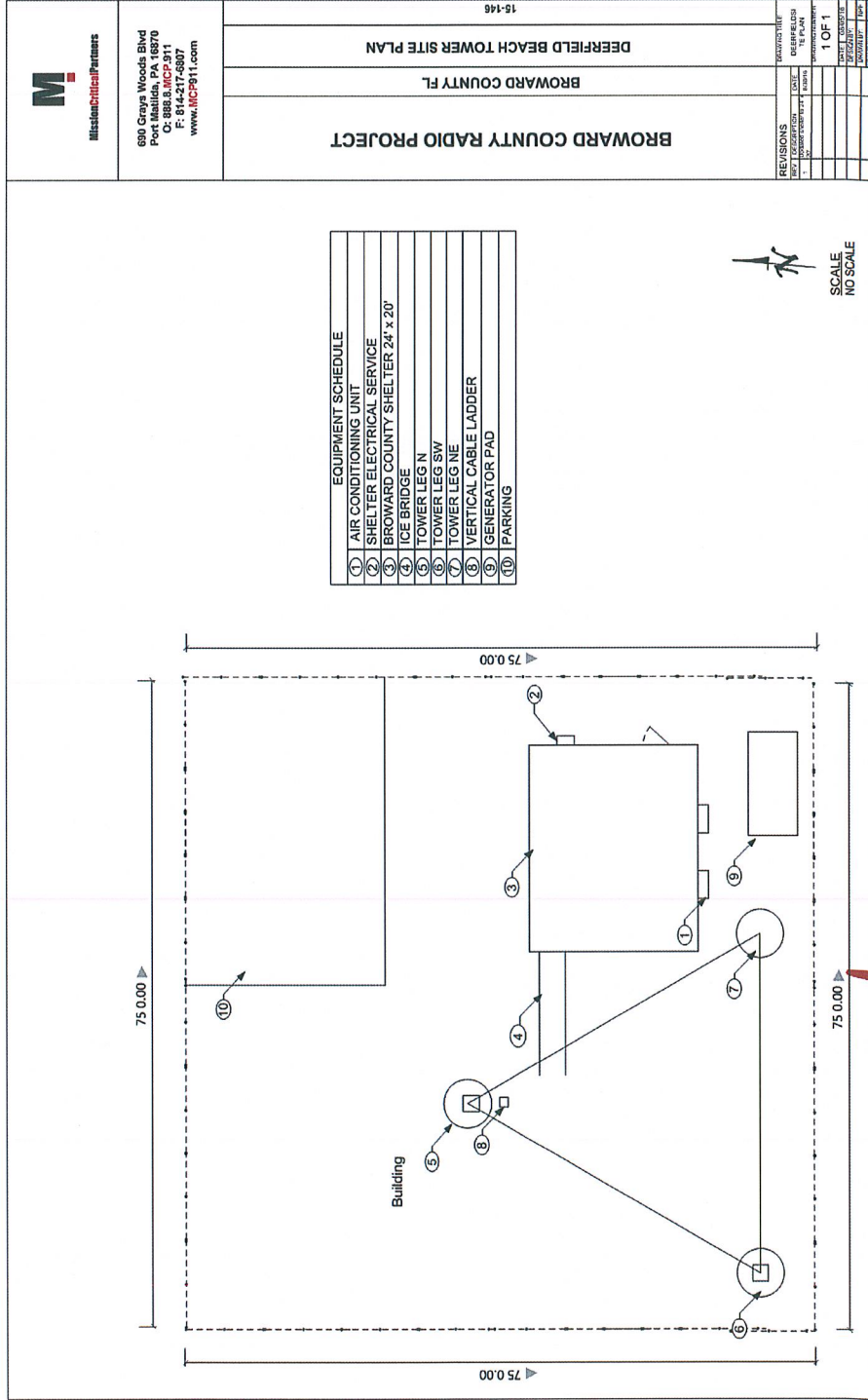
Public Safety Radio Tower

- This tower is needed to properly cover Tamarac
- Either Police Dept. or Ball Park locations are acceptable
- A 300 ft high tower is desired for optimal system performance for Tamarac and surrounding users
 - Top mounted candelabra for multiple antennas
 - 325 ft total height with antennas
 - Lattice self supporting tower for capacity
 - Equipment shelter at tower base





Site Layout



| EQUIPMENT SCHEDULE | |
|--------------------|----------------------------------|
| ① | AIR CONDITIONING UNIT |
| ② | SHELTER ELECTRICAL SERVICE |
| ③ | BROWARD COUNTY SHELTER 24' x 20' |
| ④ | ICE BRIDGE |
| ⑤ | TOWER LEG N |
| ⑥ | TOWER LEG SW |
| ⑦ | TOWER LEG NE |
| ⑧ | VERTICAL CABLE LADDER |
| ⑨ | GENERATOR PAD |
| ⑩ | PARKING |



680 Gray Woods Blvd
 Ft. Lauderdale, FL 33309
 P: 888.8.MCP.911
 F: 814-217-6807
 www.MCP911.com

BROWARD COUNTY RADIO PROJECT
 BROWARD COUNTY FL
 DEERFIELD BEACH TOWER SITE PLAN

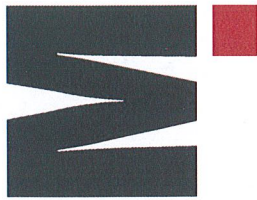
| REVISIONS | DATE | BY | DESCRIPTION |
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BROWARD COUNTY RADIO PROJECT
 BROWARD COUNTY FL
 DEERFIELD BEACH TOWER SITE PLAN

1 OF 1

SCALE: NO SCALE



Ball Park Site

Google Maps

Page 1 of 1

Google Maps



Imagery ©2016 Google, Map data ©2016 Google 200 ft

<https://www.google.com/maps/@26.2142617,-80.2537658,502m/data=!1e3?hl=en>

6/28/2016

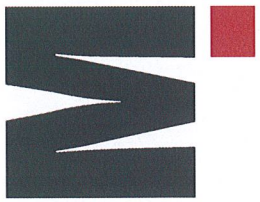
www.surveycommunicationconsultants.com



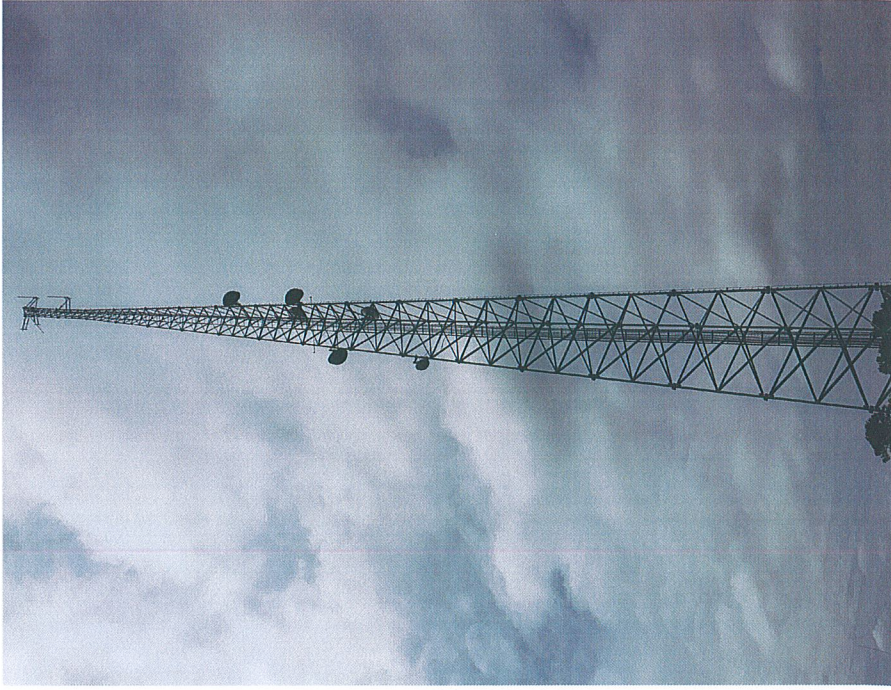
Your Life Safety Mission Is Our Passion

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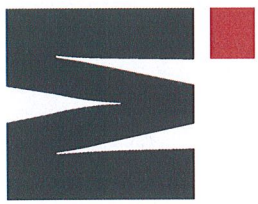


Typical Tower



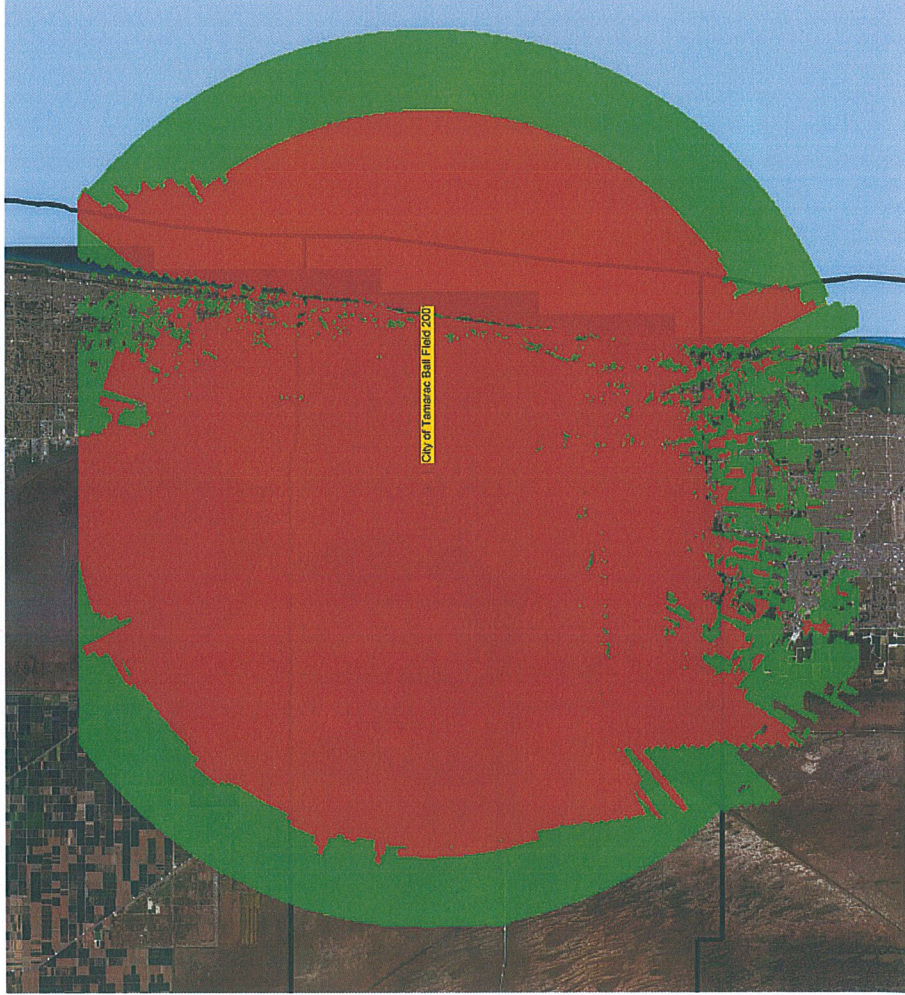
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200 vs 300 Tower Coverage to a Portable Radio on street

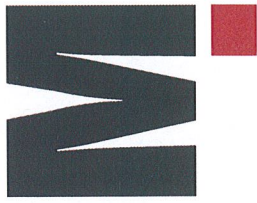
Orange – 200'
Green – 300'



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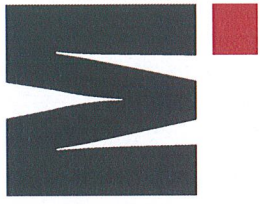


Reduced Tower Height Impact

Lowering the tower from 300' to 200' will reduce functionality and growth potential

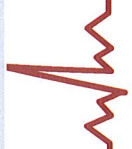
- Loss of geographic coverage to and from user radios.
- Will impact Tamarac Public Safety users
 - Smaller primary coverage area and reduced cell-edge coverage
 - Reduced Tamarac coverage in the event of system failure when this tower provides the only coverage
 - Limits the amount of overlap coverage which is critical outside Tamarac if adjacent sites fail
 - Limits the number of antennas on the tower for additional services or county system expansion e.g. FirstNet
 - Failure modes such as Site Trunking and Failsoft, caused by network loss, rely on single towers to maintain mission critical communications. Tower height is critical to provide needed coverage.





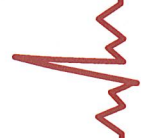
Pros and Cons

| 300' Tower | 200' Tower |
|---|---|
| Improved cell-edge coverage | Reduced cell-edge coverage |
| Increased room for additional expansion (i.e. FirstNet) | Limited room for future expansion |
| Room to accommodate additional tenants, reducing the need for additional towers in the area | Little room for additional tenants |
| Improved overlapping coverage with surrounding sites, providing improved performance in failure scenarios | Minimal overlapping coverage with surrounding sites, providing limited performance in failure scenarios |
| Marginally larger ground-space footprint required | Marginally smaller ground-space footprint required |
| 100' additional view obstruction | 100' less view obstruction |





Discussion



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