Engineering Statement

CBS Operations Investments Inc.

W23CN-D(STA) Sebring, Florida

Facility ID 74113

Ch. 36 5.2 kW (Max-DA) 145.6 m

CBS Operations Investments Inc. (ViacomCBS) seeks to extend temporary approval for operation of an interim antenna for W23CN-D Sebring, Florida to allow continued operation on post-transition channel 36 for another 180 days.[1] The proposed facility will continue operating with a directional antenna height 145.6 meters above mean sea level and a maximum effective radiated power (ERP) of 5.2 kW. The antenna is being utilized during the replacement of the W23CN-D main antenna and transmitter required due to the incentive auction repack. This Statement restates the allocations, environmental, and radiofrequency factors provided in the original application. No changes are proposed.

The proposed STA coverage shown in **Figure 1** is similar to that of the licensed, pre-transition facility.[2] Compared to the authorized, post-transition facility, the STA proposes approximately 1/3 of the ERP, slightly less antenna height, and no change in location. Therefore, the proposed STA coverage will not extend beyond that of the authorized facility.[3] There are no AM station transmitter sites within 3 km so FCC Rule §1.30002 is not triggered. Thus, it is believed that the proposed facility satisfies all allocation matters.

The proposed facility uses an existing tower[4] with no change in overall height, marking specifications, or lighting specifications. Because no tower modification is required, this application is categorically excluded from environmental processing.

The proposed operation was evaluated for human exposure to radiofrequency energy using equation ten (10) from the Commission's OET Bulletin No. 65. The horizontally polarized antenna will be located 112.2 meters above ground level and will have a horizontally polarized ERP of 5.2 kilowatts. According to the manufacturer, the proposed antenna relative field

[1] Please see FCC LMS file numbers 0000095029 and 0000114630.
[2] *See* FCC file number BLDTT-20090903AAH.
[3] *See* FCC file number 0000105708.
[4] *See* Antenna Structure Registration 1030953.

elevation pattern does not exceed 15 percent relative field at elevation angles from 15 to 90 degrees below the horizon. Therefore, a relative field value of 15 percent was used for this calculation.

Calculations show that the proposed facility would contribute a power density no greater than 0.3 μW/cm² at two meters above ground level or 0.1 percent of the FCC's 402 μW/cm² "uncontrolled/general population" exposure limit for UHF Channel 36 (603 MHz). RF power density is expected to be even lower at ground level locations farther away from the base of the tower, due to the increasing distance from the transmitting antenna.

According to §1.1307(b)(3), facilities at locations with multiple emitters are categorically excluded from responsibility for taking corrective action in areas where their contribution is less than five percent of the limit. Since the calculated exposure is less than five percent at all ground level areas, the impact of other possible contributors should not be a factor.

Tower access will continue to be controlled and appropriate RF exposure warning signs will continue to be posted. A site exposure policy is in effect that includes restriction of access, power reduction, or the complete shutdown of facilities when work must be performed where predicted RF levels would otherwise exceed appropriate guidelines. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with all pertinent stations.

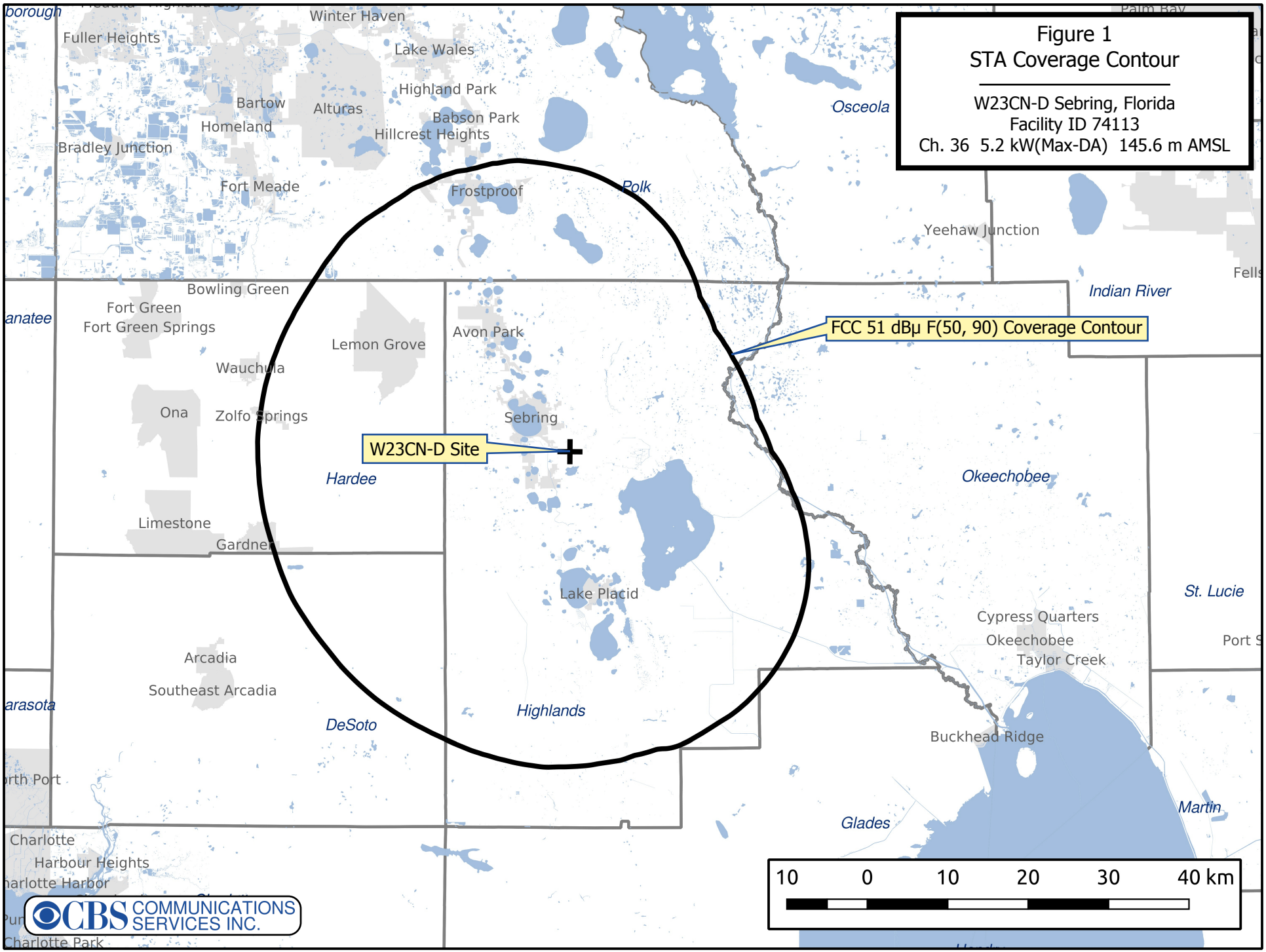
Figure 1
STA Coverage Contour
W23CN-D Sebring, Florida
Facility ID 74113
Ch. 36 5.2 kW(Max-DA) 145.6 m AMSL
FCC 51 dBµ F(50, 90) Coverage Contour
W23CN-D Site
Winter Haven
Fuller Heights
Lake Wales
Highland Park
Bartow
Alturas
Homeland
Babson Park
Hillcrest Heights
Bradley Junction
Fort Meade
Frostproof
Polk
Osceola
Yeehaw Junction
Indian River
Bowling Green
Fort Green
Fort Green Springs
Avon Park
Lemon Grove
Wauchula
Ona
Zolfo Springs
Sebring
Hardee
Okeechobee
Limestone
Gardner
Lake Placid
St. Lucie
Cypress Quarters
Okeechobee
Taylor Creek
Arcadia
Southeast Arcadia
DeSoto
Highlands
Buckhead Ridge
Martin
Glades
Charlotte
Harbour Heights
Charlotte Park
10 0 10 20 30 40 km
CBS COMMUNICATIONS SERVICES INC.