



## **ENGINEERING STATEMENT**

**IN SUPPORT OF  
REQUEST FOR SPECIAL TEMPORARY AUTHORITY  
WMYD  
DETROIT, MI**

### **Request for Special Temporary Authority**

Scripps Broadcasting Holdings LLC (Scripps) is the licensee of WMYD, located at Detroit, MI which is presently licensed to operate its digital facility on Ch. 21. The FCC assigned Ch. 31 to WMYD for its post-incentive auction facility and scheduled it to complete construction in Phase 3, which has a deadline of June 21, 2019.

The current WMYD antenna is collocated at the top of a candelabra tower (ASR#1003429) with the antennas for WTVS and WWJ. Both WTVS and WWJ have to transition to new channels as part of the post-incentive auction repack. Unfortunately, the structural capacity of the tower is limited, so the stations had no choice but to share a broadband interim antenna so that all three had an option for interim operation while their main antennas are replaced at the top of the tower in order to complete repack.

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The licensed WMYD azimuth pattern is fairly directional, and the pattern of the interim antenna is not a good match, particularly on the backside of the antenna (between 80-95 degrees relative to true north). In order to keep the noise-limited contour of the interim facility inside the noise-limited contour of the licensed facility, the WMYD interim facility would need to keep its ERP at 183 kW which is well below the authorized power of 500 kW. The lower ERP, in combination with the difference in the radiation center height of its main antenna (523.3m AMSL) vs. the interim antenna (444.1m AMSL), is predicted to result in a 10% loss in interference free coverage. Figure 1, attached hereto, is a map showing the predicted noise-limited contour the licensed facility vs. the predicted noise-limited contour of the interim facility with an ERP of 183 kW.

WMYD would like to maintain as much coverage as possible, and the interim facility is capable of achieving an ERP of 470 kW. With this higher ERP, the noise-limited contour of the interim facility would exceed the noise-limited contour of the licensed facility between the azimuths of 80-95 degrees (relative to true North). Figure 2, attached hereto, is a map showing the predicted noise-limited contour the licensed facility vs. the predicted noise-limited contour of the interim facility with an ERP of 470 kW. The coverage loss in the interference free service population between this higher power interim facility and the licensed facility is 6.8%.

The predicted interference free service populations from TVStudy (2km cell, 0.1 km terrain increment) for the licensed facility, the interim facility with an ERP of 183 kW and the interim facility with an ERP of 470 kW are:

Licensed Facility:	5,426,320 persons
Interim Facility (Limited to ERP of 183 kW):	4,879,197 persons
Interim Facility (ERP of 470 kW):	5,058,908 persons

From the population numbers above, it can be seen that interim facility with an ERP of 183 kW is predicted to lose 547,123 persons of the interference free coverage (compared to the licensed facility) while the interim facility with an ERP of 470 kW would loss 367,412 persons, preserving the coverage



of 179,711 persons. Scripps respectfully requests Special Temporary Authority to operate WMYD on Ch. 21 with the following parameters:

Coordinates: 42° 26' 53.0" N (NAD83)  
83° 10' 23.0" W  
ERP: 470.0 kW (DA)  
RCAMSL: 444.1m

### **Environmental/RFR**

This report addresses only the conditions specified in 47CFR1.1307 that deal with Radio Frequency Radiation (RFR). Any other non-RFR conditions that might require the preparation of an EA are beyond the scope of this report; since the structure is existing and registered, such conditions should not be an issue requiring further consideration.

The location of the proposed post-incentive auction facility is a multi-user site and it is assumed that the site is currently “in compliance” with FCC guidelines for human exposure to RFR (as defined in OET-65). The worst case ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.007859mW/cm<sup>2</sup>, which is less than 5% of the MPE for public exposure (0.343333 mW/cm<sup>2</sup>) at Ch. 21 (512-518 MHz). The contribution to the overall RFR from the proposed facility is negligible and, therefore, the site will remain “in compliance” with FCC guidelines.

Scripps agrees to comply with the Commission’s requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR

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monitors when on the structure. The tower base is enclosed by a locked security fence and appropriate signage warning of potential RFR hazards is posted.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

A handwritten signature in black ink, appearing to read "Ben Pidek", is written over a horizontal line.

Benjamin L. Pidek, P.E.  
February 26, 2019

Attached:

- Figure 1 - Noise-Limited Contour of WMYD Ch. 21 Licensed Facility vs. Noise-Limited Contour of STA Facility with ERP of 183 kW
- Figure 2 - Noise-Limited Contour of WMYD Ch. 21 Licensed Facility vs. Noise-Limited Contour of STA Facility with ERP of 470 kW

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**Noise Limited Contour of Existing WMYD Licensed Facility vs.  
Noise Limited Contour of Interim Facility with ERP of 183 kW**

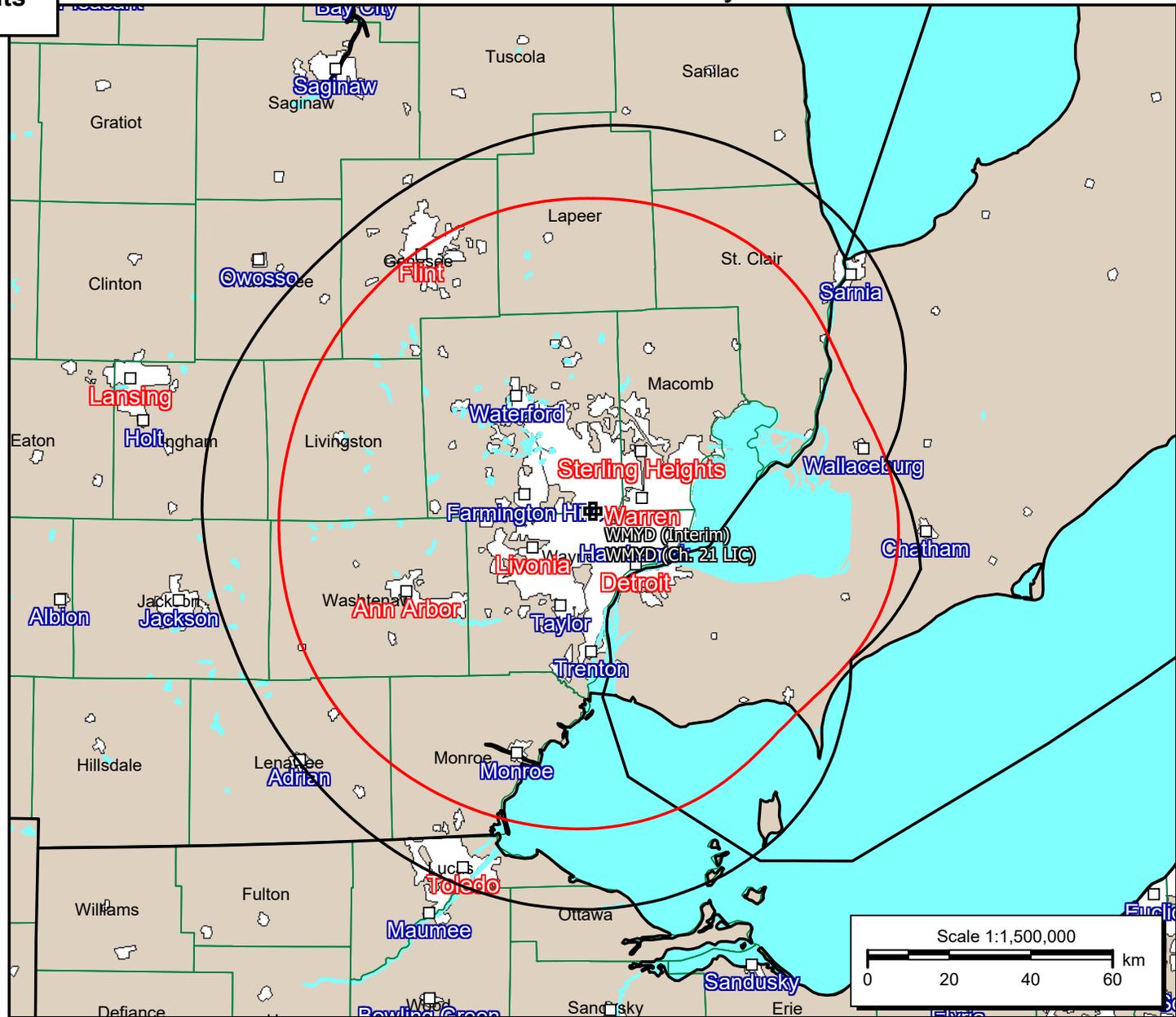
**Mid-State Consultants**

**WMYD (Ch. 21 LIC)**

BLCDT-20040524AOG  
 Latitude: 42-26-52.87 N  
 Longitude: 083-10-23.26 W  
 ERP: 500.00 kW  
 Channel: 21  
 Frequency: 515.0 MHz  
 AMSL Height: 523.3 m

**WMYD (Interim)**

Latitude: 42-26-52.87 N  
 Longitude: 083-10-23.26 W  
 ERP: 183.00 kW  
 Channel: 21  
 Frequency: 515.0 MHz  
 AMSL Height: 444.1 m



**Black - Noise Limited Contour of WMYD Licensed Facility**  
**Red - Noise Limited Contour of WMYD Interim Facility (ERP - 183 kW, RCAMSL - 444.1m)**

**Figure 1**  
**02-08-18**

**Noise Limited Contour of Existing WMYD Licensed Facility vs.  
Noise Limited Contour of Interim Facility with ERP of 470 kW**

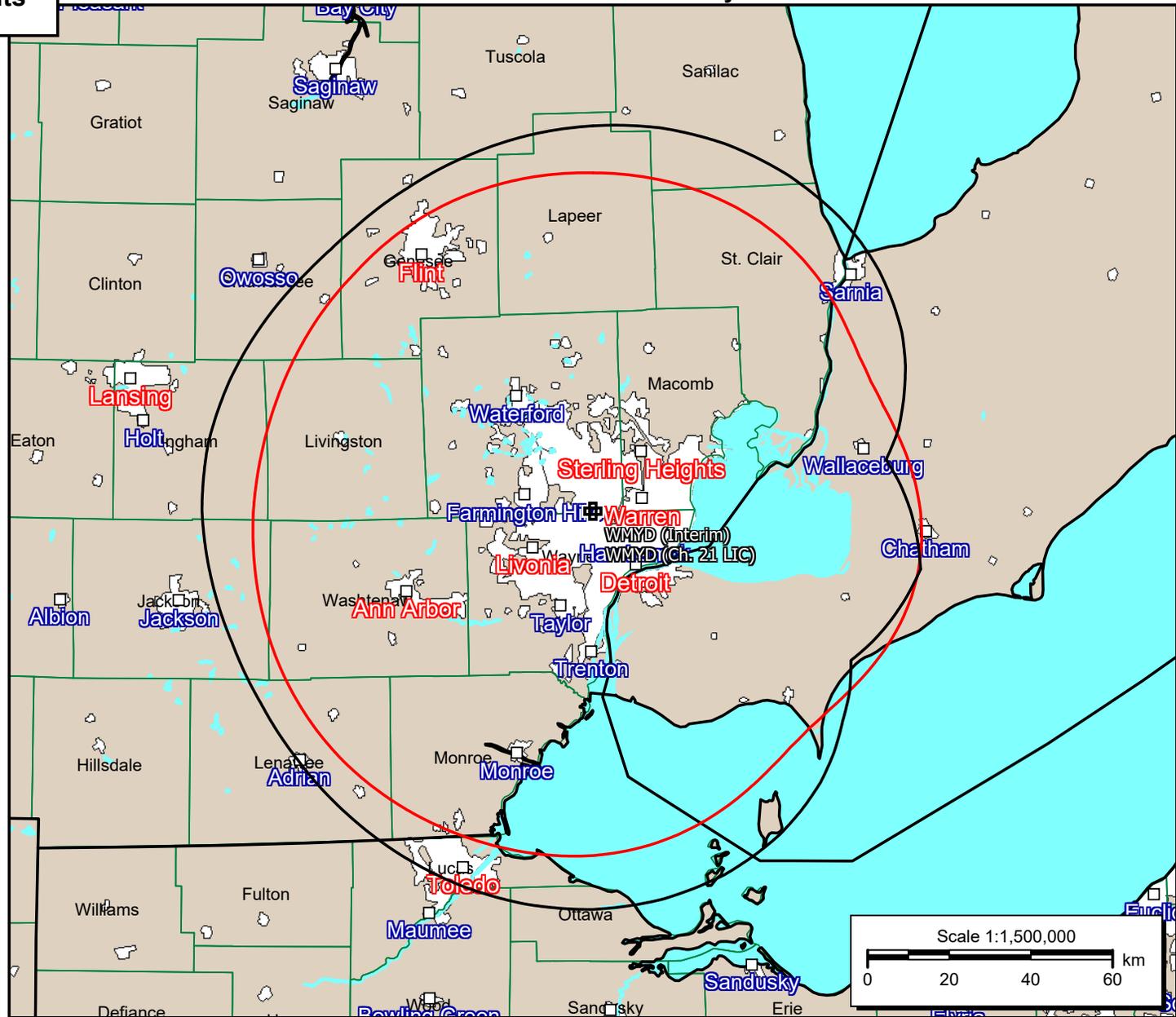
**Mid-State Consultants**

**WMYD (Ch. 21 LIC)**

BLCDT-20040524AOG  
 Latitude: 42-26-52.87 N  
 Longitude: 083-10-23.26 W  
 ERP: 500.00 kW  
 Channel: 21  
 Frequency: 515.0 MHz  
 AMSL Height: 523.3 m

**WMYD (Interim)**

Latitude: 42-26-52.87 N  
 Longitude: 083-10-23.26 W  
 ERP: 470.00 kW  
 Channel: 21  
 Frequency: 515.0 MHz  
 AMSL Height: 444.1 m



**Black - Noise Limited Contour of WMYD Licensed Facility  
 Red - Noise Limited Contour of WMYD Interim Facility (ERP - 470 kW, RCAMSL - 444.1m)**

**Figure 2  
 02-08-18**