Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

ENGINEERING STATEMENT

Request for Special Temporary Authorization

prepared for

Young Broadcasting of San Francisco, Inc.
KRON-DT San Francisco, CA
Digital Channel 38
Facility ID 65526

Young Broadcasting of San Francisco, Inc. ("Young") is the licensee of television station KRON-TV, analog Channel 4 and digital Channel 57, San Francisco, CA. This statement supports *Young's* request for Special Temporary Authority ("STA") to initially operate the post-transition digital KRON-DT facility at reduced power. This statement supplies coverage and population data as specified in the Report and Order in the Third Periodic Review[1] for a phased implementation (alternative buildout) of the KRON-DT post-transition operation.

A construction permit (BPCDT-20080411AAP) authorizes KRON-DT to operate its post-transition digital facility on Channel 38. This channel was established in Appendix B of the Seventh Report and Order in MB Docket 87-278. The authorized post-transition digital operation involves an effective radiated power ("ERP") of 890 kW at 446 meters antenna height above average terrain ("HAAT"), with a directional antenna.[2] The proposed STA facility will operate with the authorized antenna at 445 kW ERP, which is 50 percent of the authorized ERP. No interference study is necessary, since the STA request specifies use of the authorized post-transition antenna system at reduced power.

---

[1] *Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television,* MB Docket No. 07-91, FCC 07-228, released December 31, 2007.

[2] Subsequent to the grant of BPCDT-20080411AAP (890 kW / 446 meters), a maximization application was filed and granted (BMPCDT-20080619AFU, for 1000 kW / 512 meters). *Young* intends to initially construct the facilities authorized under BPCDT-20080411AAP (890 kW / 446 meters), and then construct the maximized facility (BMPCDT-20080619AFU, 1000 kW / 512 meters) later in 2009 after reconfiguration of the top-mounted antennas is completed.

Post-transition, KRON-DT will employ the same transmitter currently utilized on its transitional digital Channel 57 following modifications for the frequency change to Channel 38. The transmitter contains two power amplifiers to achieve the required power output. One power amplifier will be modified prior to the transition date, with the remaining amplifier remaining on the transitional Channel 57 to provide service on that channel until the transition date. The initial reduced power operation on Channel 38 is necessary in order for remaining amplifier to be modified for operation on Channel 38 subsequent to the transition date.

A contour comparison map is supplied as **Figure 1,** showing that the 445 kW STA facility's 48 dBμ (city grade) contour will encompass the principal community. **Figure 1** also supplies the coverage contours associated with the authorized digital Channel 38 facility (890 kW / 446 m) as well as the currently licensed analog Channel 4 and digital Channel 57 facilities.

Population counts for the various KRON-TV/DT facilities are summarized below as determined using OET Bulletin 69[3] analysis. The area which is common to both the current analog and digital operations is the target for match by a post-transition reduced power phased implementation. The proposed STA facility would provide a greater than 100 percent population match of the licensed analog and digital KRON-TV/DT facilities' common service population.

Population Summary

KRON-TV/DT Facility	Interference-Free Population (2000 Census)
Licensed Analog Ch. 4 (BLCT-19990222KH)	6,623,367
Licensed Digital Ch. 57 (BLCDT-19990503KF)	6,250,055
Proposed STA Digital Ch. 38	6,273,343

The proposed STA operation complies with the FCC's limits concerning human exposure to RF energy. Based on OET-65 equation (10), and considering 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 15 to

[3]FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). A standard cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.

90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is 3.0 $\mu W/cm^2$, which is 0.7 percent of the general population/uncontrolled maximum permitted exposure limit. This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent. The applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

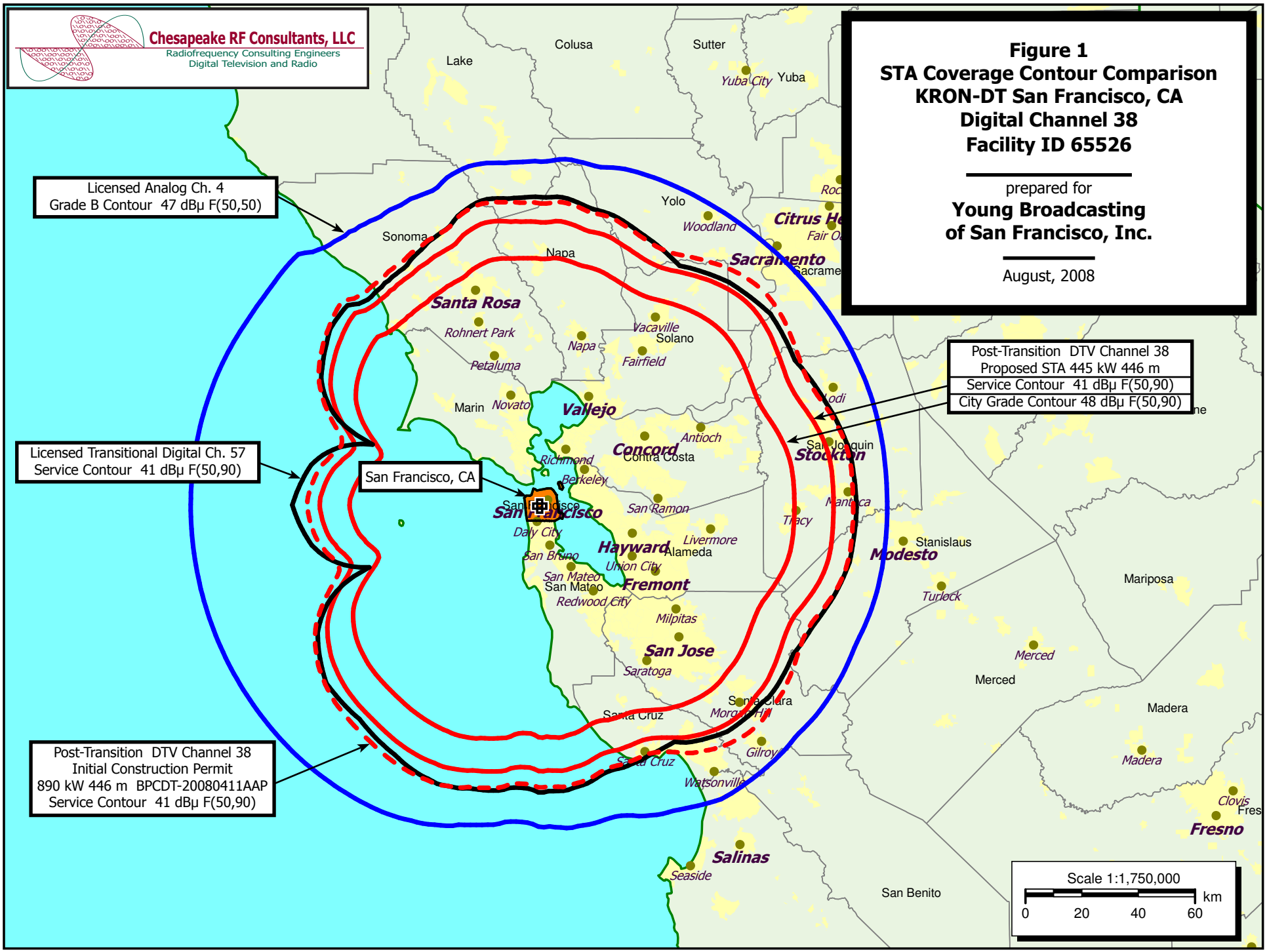
The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.

Joseph M. Davis, P.E.
August 14, 2008

Chesapeake RF Consultants, LLC
11993 Kahns Road
Manassas, VA 20112
703-650-9600

List of Attachments

Figure 1 STA Coverage Contour Comparison


Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio
Figure 1
STA Coverage Contour Comparison
KRON-DT San Francisco, CA
Digital Channel 38
Facility ID 65526
prepared for
Young Broadcasting
of San Francisco, Inc.
August, 2008
Licensed Analog Ch. 4
Grade B Contour 47 dBµ F(50,50)
Licensed Transitional Digital Ch. 57
Service Contour 41 dBµ F(50,90)
Post-Transition DTV Channel 38
Initial Construction Permit
890 kW 446 m BPCDT-20080411AAP
Service Contour 41 dBµ F(50,90)
Post-Transition DTV Channel 38
Proposed STA 445 kW 446 m
Service Contour 41 dBµ F(50,90)
City Grade Contour 48 dBµ F(50,90)
San Francisco, CA
Scale 1:1,750,000
0 20 40 60 km
Colusa
Lake
Sutter
Yuba City
Yuba
Yolo
Woodland
Sonoma
Napa
Sacramento
Santa Rosa
Rohnert Park
Petaluma
Vacaville
Solano
Fairfield
Napa
Marin
Novato
Vallejo
Lodi
Antioch
Concord
Contra Costa
Richmond
Berkeley
Stockton
San Ramon
Tracy
Livermore
Hayward
Alameda
San Bruno
Union City
San Mateo
San Mateo
Fremont
Redwood City
Milpitas
San Jose
Saratoga
Santa Cruz
Gilroy
Watsonville
Salinas
Seaside
San Benito
Stanislaus
Modesto
Turlock
Mariposa
Merced
Merced
Madera
Madera
Clovis
Fresno