ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Modification of Digital Television Station Construction Permit

prepared for

Sarkes Tarzian, Inc.
KTVN(DT) Reno, NV
Facility ID 59139
Ch. 11 20.6 kW 891 m

Sarkes Tarzian, Inc. ("STI") is the licensee of digital television station KTVN(DT), Channel 13, Facility ID 59139, Reno, NV. Reassignment of KTVN from Channel 13 to Channel 11 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (*"CCRPN"*, DA 17-317, released April 13, 2017). *STI* herein proposes modification of the KTVN Channel 11 Construction Permit ("CP", file# 0000025333). This application is intended to be filed during the second filing window.[1] The CP authorizes operation with an effective radiated power ("ERP") of 15.9 kW at 891 meters antenna height above average terrain ("HAAT"). *STI* herein proposes herein to increase the ERP to 20.6 kW.

As with the current authorization, the proposed Channel 11 operation will employ the existing broadband shared antenna system utilized by the licensed KTVN facility. The tower structure is not presently registered with the FCC, as it is an existing structure of less than 61 meters overall height above ground and there are no known landing areas within 8 km according to the FCC's "TOWAIR" slope test program. No change to the structure's overall height is proposed. FAA notification and commensurate FCC registration are not necessary.

Figure 1 supplies a map that demonstrates compliance with §73.625(a)(1) regarding coverage of the entire principal community. The proposed facility's predicted population exceeds 95 percent of the *CCRPN* baseline facility's population.

[1]Public Notice *"Incentive Auction Task Force and Media Bureau Announce the Opening of the Second Filing Window for Eligible Full Power and Class A Television Station—October 3 Through November 2, 2017"* DA 17-911, released September 20, 2017.

Interference study per FCC OET Bulletin 69[2] shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1.

The proposed 20.6 kW ERP exceeds the maximum allowed for the proposed antenna HAAT of 891 meters permitted by §73.622(f)(7). Section 73.622(f)(5) permits the maximum ERP to be exceeded in order to provide the same geographic coverage area as the largest station within the same market. The total area within the proposed KTVN NLSC is 49,168 square kilometers, which does not exceed the contour area of KREN-TV (49,197 sq. km, Ch. 26, Reno, NV, BLCDT-20090227AAM). Thus, the 20.6 kW ERP specified herein is in compliance with §73.622(f)(5) of the FCC's Rules.

The nearest FCC monitoring station is 240 km distant at Livermore, CA. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). There are no authorized AM stations within 3 kilometers of the site. The site location is beyond the border areas requiring international coordination.

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The transmitting location is on Slide Mountain overlooking Reno. There are numerous other transmitting facilities at this site area situated on various antenna supporting structures. *STI* participates in a radiofrequency ("RF") electromagnetic field exposure safety program, along with other broadcasters and FCC licensees that utilize the Slide Mountain site area. Following construction of the proposed facility, *STI* will conduct RF exposure measurements (and/or detailed calculations) to evaluate the level of RF exposure resulting from the proposed KTVN

[2]FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). This analysis employed the FCC's current "TVStudy" software with the default application processing template settings, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCCs implementation of TVStudy show excellent correlation.

facility. As necessary, based on these results and considering all emitters, appropriate exposure abatement procedures will be established and followed, in order to comply with the FCC's exposure limits. Such abatement procedures may involve the restriction of access to certain areas and/or facility modifications to reduce RF levels.

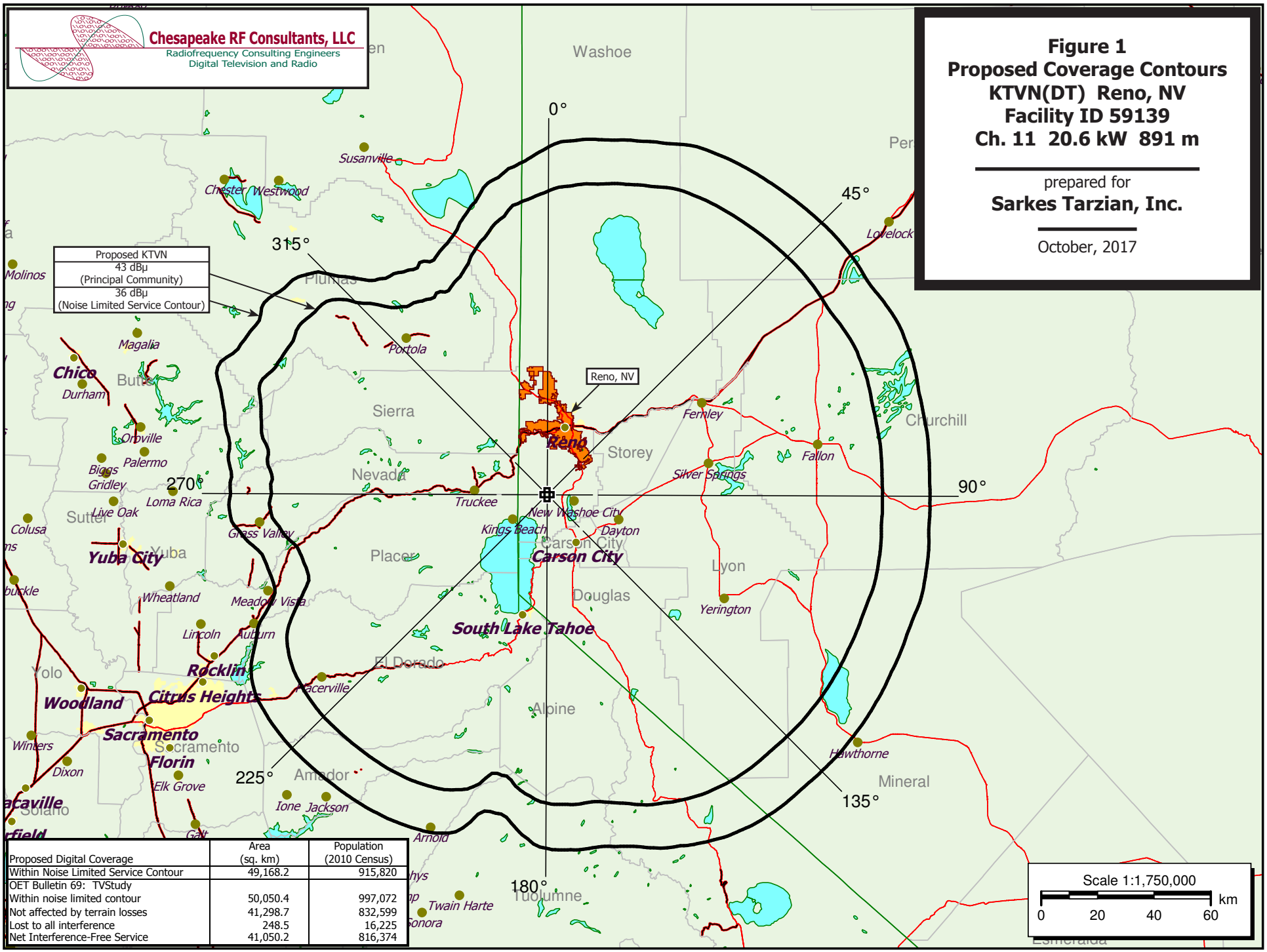
Considering the post-construction measurement and an appropriate abatement program, the general public and workers will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, authorized personnel will be trained and/or supervised as necessary for access to any "controlled" areas. *STI* 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.

This exhibit is limited to the evaluation of exposure to RF electromagnetic field. No tower work is required to carry out this proposal.

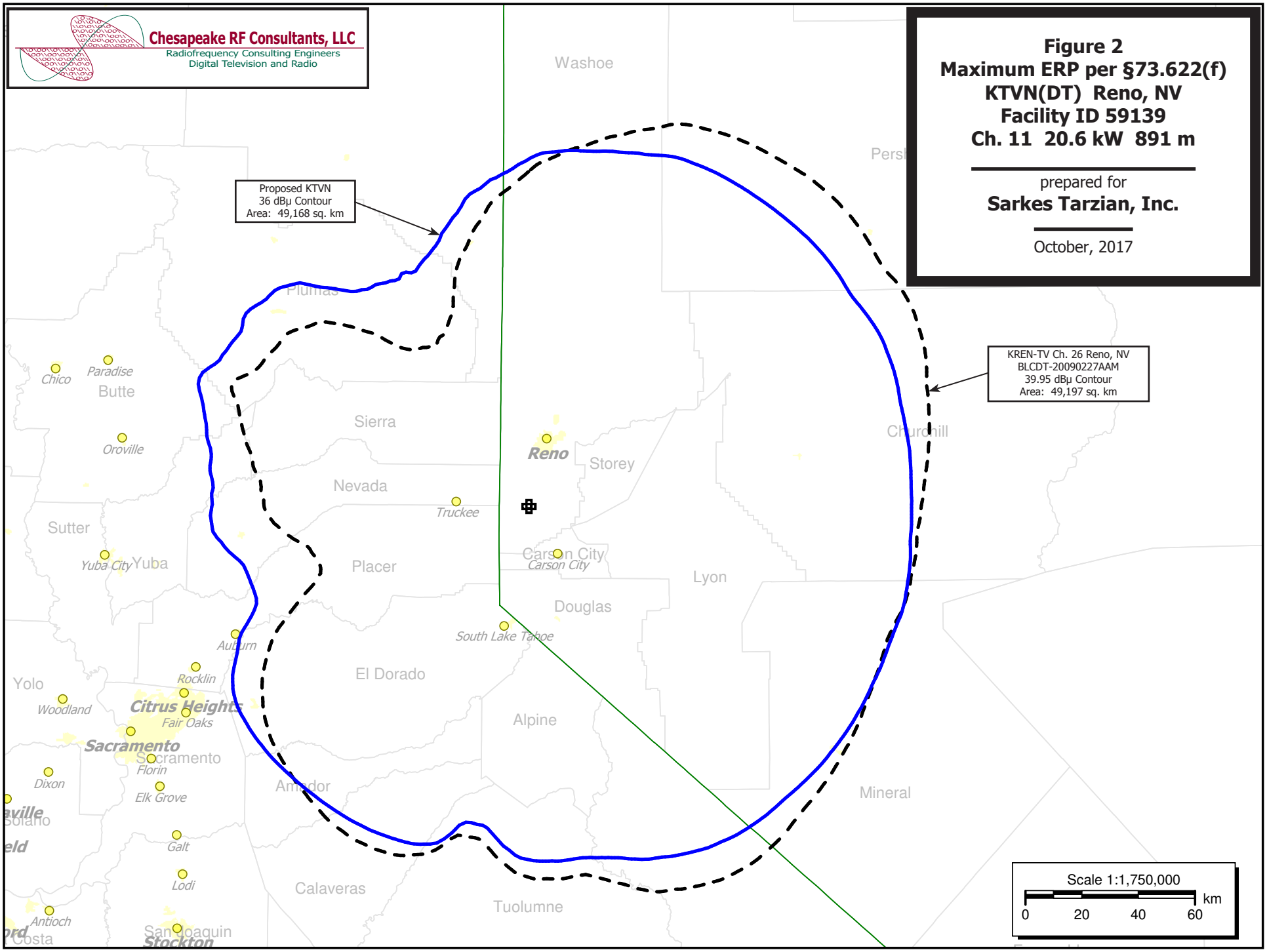
List of Attachments

Figure 1	Proposed Coverage Contours
Figure 2	Maximum ERP per §73.622(f)
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC
Joseph M. Davis, P.E. October 9, 2017
207 Old Dominion Road Yorktown, VA 23692 703-650-9600



Proposed Digital Coverage	Area (sq. km)	Population (2010 Census)
Within Noise Limited Service Contour	49,168.2	915,820
OET Bulletin 69: TVStudy		
Within noise limited contour	50,050.4	997,072
Not affected by terrain losses	41,298.7	832,599
Lost to all interference	248.5	16,225
Net Interference-Free Service	41,050.2	816,374


Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio
Figure 2
Maximum ERP per §73.622(f)
KTVN(DT) Reno, NV
Facility ID 59139
Ch. 11 20.6 kW 891 m
prepared for
Sarkes Tarzian, Inc.
October, 2017
Proposed KTVN
36 dBμ Contour
Area: 49,168 sq. km
KREN-TV Ch. 26 Reno, NV
BLCDT-20090227AAM
39.95 dBμ Contour
Area: 49,197 sq. km
Washoe
Plumas
Sierra
Nevada
Placer
Sutter
Yuba
Butte
Chico
Paradise
Oroville
Yuba City
Reno
Storey
Truckee
Carson City
Douglas
South Lake Tahoe
Lyon
Churchill
Mineral
Alpine
El Dorado
Amador
Calaveras
Tuolumne
Yolo
Woodland
Rocklin
Auburn
Citrus Heights
Fair Oaks
Sacramento
Florin
Elk Grove
Dixon
Galt
Lodi
Antioch
Stockton
San Joaquin
Scale 1:1,750,000
km
0
20
40
60