

**TECHNICAL STATEMENT
CALIFORNIA OREGON BROADCASTING, INC.
K41JQ-D 0.645 KW-DA 435.5 M AMSL CH. 33
ROSEBURG, OREGON**

INTRODUCTION

California Oregon Broadcasting, Inc. ("COBI"), the licensee of digital low power television station K41JQ-D, Facility ID No. 8316, seeks authority to operate on a temporary channel in accordance with the procedures set forth in Public Notice DA 17-584 for secondary television stations "operating" on channels 38 thru 51 that are displaced prior to the Special Displacement Window.¹ Accordingly, COBI submits the following two filings to facilitate temporary operation on a post-auction television channel: (1) a displacement application to operate on Channel 33 together with a request to waive the Displacement Freeze and (2) a request for Special Temporary Authority (STA) to operate on Channel 33 as proposed in the aforementioned displacement application.

ELIGIBILITY & WAIVER REQUEST

K41JQ-D is currently operating on Channel 41, which has been repurposed for the new 600 MHz Band, and it is eligible to operate on a temporary channel for the following two reasons. First, COBI has received a 120-day notice from T-Mobile USA, Inc. ("T-Mobile") stating that K41JQ-D is likely to cause interference in an area where it intends to commence operations by 11/27/2017. Second, this notice clearly implicates a termination of operations date for K41JQ-D that will occur before the Special Displacement Window opens. A copy of the 120-day notice from T-Mobile is attached as Figure 1.

For all the reasons indicated above, COBI requests a waiver of the Displacement Freeze to allow for the early filing of its displacement application in the Special Displacement Window and to further allow for the processing of its STA application to operate on a temporary channel.

PROPOSED FACILITY

¹ *Incentive Auction Task Force And Media Bureau Set Forth Tools Available To LPTV/Translator Stations Displaced Prior To The Special Displacement Window*, Public Notice, DA 17-584 (rel. June 14, 2017)



K41JQ-D will continue to utilize its licensed transmitter site for operation on Channel 33. It will employ a new directional antenna system with 5 degrees mechanical beam tilt.² The antenna radiation center height will be 435.5 meters above mean sea level (AMSL) and the maximum effective radiated power (ERP) will be 0.645 kW. It also will employ a full-service out-of-channel emission mask. This antenna will be shared by co-owned station K38LQ-D, which is also simultaneously seeking authority to operate on a temporary channel. A plot of the manufacturer's elevation pattern that reflects the specified down tilt is shown in Figure 2.

INTERFERENCE PROTECTION AND OET-69 ANALYSIS SETTINGS

A copy of the *TVStudy* analysis summary is provided in Figure 3. This summary indicates that no interference check failures were found and therefore the proposal is not predicted to cause new interference beyond the normal tolerance to any existing or post-auction stations.³ The summary further reflects that the following analysis settings were used:

Study cell size: 0.5 kilometer
Profile point spacing: 0.5 kilometer

ENVIRONMENTAL IMPACT

The displacement application and request for STA specify an existing FCC registered tower that was constructed before March 16, 2001.⁴ Given that the application seeks to replace an existing antenna and there will be no substantial increase in the size of the existing

² The proposed antenna is a directional composite of three panel antennas, Kathrein (KAT) Model 1 x 3 75010210. Each panel will be spaced 90 degrees apart in azimuth and each one will have 5 degrees of mechanical down tilt in the direction of its main lobe.

³ *TVStudy* Program, Version 2.2.4.

⁴ 47 CFR Part 1, App. B, § III.A. "An antenna may be mounted on an existing tower constructed on or before March 16, 2001 without such collocation being reviewed through the Section 106 process set forth in the NPA, unless: 1. The mounting of the antenna will result in a substantial increase in the size of the tower as defined in Stipulation I.E, above; or, 2. The tower has been determined by the FCC to have an adverse effect on one or more historic properties, where such effect has not been avoided or mitigated through a conditional no adverse effect determination, a Memorandum of Agreement, a programmatic agreement, or a finding of compliance with Section 106 and the NPA; or, 3. The tower is the subject of a pending environmental review or related proceeding before the FCC involving compliance with Section 106 of the National Historic Preservation Act; or, 4. The collocation licensee or the owner of the tower has received written or electronic notification that the FCC is in receipt of a complaint from a member of the public, an Indian Tribe, a SHPO or the Council, that the collocation has an adverse effect on one or more historic properties."



antenna-supporting structure,⁵ the criteria outlined in 47 CFR § 1.1307(a) for certain types of facilities that may significantly affect the environment do not apply. With regard to the rules for limiting human exposure to radio-frequency (RF) energy in 47 CFR § 1.1307(b), the station will continue to operate a UHF broadcast antenna in full compliance with those guidelines as described in greater detail below. The following technical specifications are proposed:

Frequency :	584 - 590 MHz (UHF Channel 33)
Effective Radiated Power:	0.645 kW
Antenna Type:	KAT 1x3 75010210
Antenna Beamtilt:	5 degrees mechanical
Antenna Polarization:	Horizontal
Antenna Height:	33.2 meters AGL
Location coordinates:	43-12-02.0 N, 123-23-02.0 (NAD83)
Site elevation:	402.3 meters AMSL
Overall tower height:	36.0 meters AGL
FCC ASRN:	1064193; Constructed in 1996

Using the methodology for predicting power density levels for UHF broadcast antennas outlined in *FCC OET Bulletin No. 65, Edition 97-01*, (OET-65), it was determined that the proposed Channel 33 facility will produce a maximum power density of 1.99 $\mu\text{W}/\text{cm}^2$ at points 2 meters above ground (approximate human head height). This worst-case exposure level was calculated using 30 percent antenna relative field. The maximum exposure limits applicable to Channel 33, as established for uncontrolled and controlled situations in 47 CFR § 1.1310, are 389 $\mu\text{W}/\text{cm}^2$ and 1,947 $\mu\text{W}/\text{cm}^2$ respectively. Because the maximum exposure level determined for the proposed facility is not more than 5% of those guidelines, no further showing of compliance is necessary. Accordingly, this application complies with the RF

⁵ 47 CFR Part 1, App. B, § I.C. A substantial increase in size means: “(1) *The mounting of the proposed antenna on the tower would increase the existing height of the tower by more than 10%, or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to avoid interference with existing antennas; or (2) The mounting of the proposed antenna would involve the installation of more than the standard number of new equipment cabinets for the technology involved, not to exceed four, or more than one new equipment shelter; or (3) The mounting of the proposed antenna would involve adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater, except that the mounting of the proposed antenna may exceed the size limits set forth in this paragraph if necessary to shelter the antenna from inclement weather or to connect the antenna to the tower via cable; or (4) The mounting of the proposed antenna would involve excavation outside the current tower site, defined as the current boundaries of the leased or owned property surrounding the tower and any access or utility easements currently related to the site.*”



exposure limits and is categorically excluded from environmental processing by 47 CFR § 1.1306.

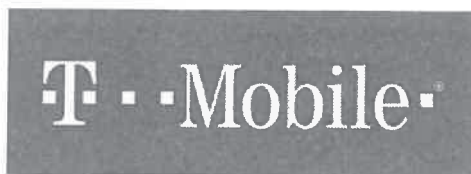
The existing tower is located on an isolated mountaintop that is not generally accessible to the public. In addition to using suitable warning signs, steps to limit exposure to persons that are authorized to access the transmitter site will be consistent with the recommendations in OET-65. All maintenance and other related work to be performed at elevations higher than 2 meters above ground will be coordinated to prevent exposure to RF fields in excess of the controlled limit. Such preventative steps shall include reducing power or shutting down the facility.

Respectfully submitted,

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Lohnes & Culver LLC
P.O. Box 881
Silver Spring, MD 20918-0881
Ph. 301-776-4488

January 30, 2018

Attachments
Figure 1 – 120-day notice
Figure 2 – Antenna Elevation Pattern Plot
Figure 3 – *TVStudy* Analysis Summary



VIA CERTIFIED MAIL & EMAIL

July 24, 2017

CALIFORNIA OREGON BROADCASTING, INC
PO Box 1489
Medford, OR 97501

RE: Notification of Intent to Begin 600MHz Operations

Dear K41JQ-D/ Facility ID:8316 Licensee:

T-Mobile USA, Inc. ("T-Mobile") is notifying you that T-Mobile is preparing to commence operations on its 600MHz spectrum in the Partial Economic Area ("PEA") # 70 by 11/27/2017 and your station is likely to cause harmful interference to T-Mobile's operations.

To determine if your station(s) is likely to cause interference, an interference analysis has been performed, as specified by the Federal Communications Commissions' ("FCC") Inter-service Interference procedures²⁹¹, using publicly available information in the FCC's Licensing and Management System ("LMS") for your facility. This analysis predicts field strength at T-Mobile's base station and user equipment locations in the PEA # 70 market from your facility. The FCC has set the thresholds at which the predicted field strength from low power TV and translator stations creates a sufficient interference risk to wireless facilities. T-Mobile has determined that your facility exceeds those thresholds and is an interference risk to its wireless operations.

T-Mobile will commence its operations in the PEA # 70 market on 11/27/2017. This letter provides the 120 days' advance notification required by FCC regulations, 47 CFR §73.3700(g)(4). The FCC regulations also require you to cease operations or eliminate the potential for harmful interference to T-Mobile's wireless facilities in the PEA # 70 market.

The FCC will work with you to attempt find a new television channel outside of the new 600 MHz mobile band that will not interfere with T-Mobile's network. You should review the FCC's Tools Available to LPTV/Translator Station Public Notice (enclosed) released on June 14, 2017 and contact Hossein Hashemzadeh, Melvin Collins, or Barbara Kreisman at the FCC for more information about the options available in your area.²⁹²

Please email 600MhzFC@T-Mobile.com once you have determined when you will eliminate the interference. If you would like additional information regarding our findings or if it might be

²⁹¹ See 30 FCC Rcd 12049, 12071, para. 49 (2015)

²⁹² See <https://www.fcc.gov/document/iatf-mb-set-forth-tools-available-lptvtranslator-stations>

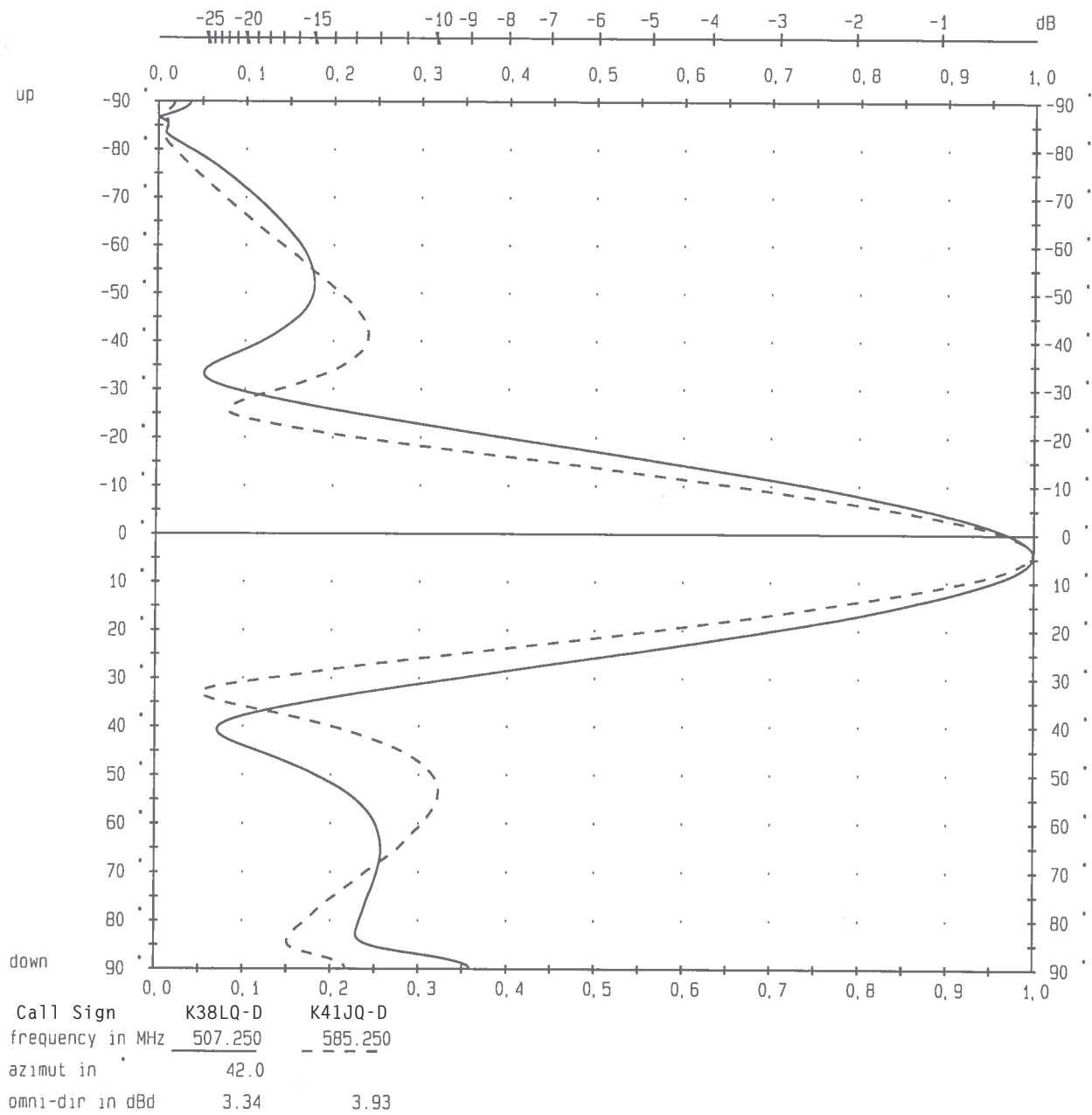
possible to coordinate our operations, please submit a request to Dan Wilson, Sr. Manager, Spectrum Engineering, at 600MhzFC@T-Mobile.com.

Sincerely,

/s/ Dan Wilson

Sr. Manager, Spectrum Engineering, T-Mobile USA, Inc.

FIGURE 2



KOBI NEBO

SCALA Medford Oregon	1 x 3 750 10210 Panel Array	Typ Nr.
MB 16.1.18 14:35	CH: 20 & 33. AZ 350-80-170	B1.:

FIGURE 3 Analysis Summary TVSTUDY, VERSION 2.2.4.

Study created: 2018.01.30 20:52:59

Study build station data: LMS TV 2018-01-26 (56)

Proposal: K41JQ-D D33 LD APP ROSEBURG, OR
File number: 0000033806-Amended
Facility ID: 8316
Station data: User record
Record ID: 41
Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

Search options:
Non-U.S. records included

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K32JY-D	D32	LD	CP	: EUGENE, OR	BNPDTL20090825BHV	98.4 km
No	K48KC-D	D32	LD	APP	COTTAGE GROVE, OR	BLANK0000029356	69.8
No	K32HF-D	D32	LD	LIC	FLORENCE, OR	BLDTT20100119ADV	100.8
No	K32JR-D	D32	LD	CP	GRANTS PASS, OR	BNPDTL20090825BGO	67.3
No	K32DY-D	D32	DC	LIC	MEDFORD, OR	BLDTA20150213ADA	112.8
No	K32CG	N32	TX	LIC	MONTGOMERY RANCH, ETC, OR	BLTT19881013IC	168.9
No	K32CG	D32	LD	CP	MONTGOMERY RANCH, ETC, OR	BDFCDTL20100326AC1	168.9
No	KNMT	D32	DT	CP	PORTLAND, OR	BLANK0000026545	262.5
No	K32JL-D	D32	LD	LIC	POWERS, OR	BLDTT20121203AHO	64.7
Yes	K42LH-D	D32	LD	APP	WINSTON, OR	BLANK0000035259	8.3
No	K32FI-D	D32	LD	LIC	YONCALLA, OR	BLDTL20110228AFN	48.9
No	KQX-LP	D33+	LD	APP	CAL - OREGON, CA	BLANK0000031876	238.7
No	KEMY-LP	N33+	TX	LIC	EUREKA, CA	BLTTL20050729AMZ	279.3
No	KEMY-LP	D33	LD	CP	EUREKA, CA	BDFCDTL20110404AEY	279.3
No	K33HH	N33	TX	LIC	REDDING, CA	BLTTL20030507AAC	291.9
No	K33AG	N33	TX	LIC	BEND, OR	BLTTL19871223ID	191.7
No	K33CP-D	D33	LD	LIC	GOLD BEACH, OR	BLANK0000011190	119.3
No	K33CP-D	N33-	TX	LIC	GOLD BEACH, OR	BLTT19900329JJ	120.0
No	KFTS	D33	DT	LIC	KLAMATH FALLS, OR	BLEDT20060202AHF	188.4
No	K33KD-D	D33	LD	LIC	LONDON SPRINGS, OR	BLDTT20091109AAX	53.8
Yes	K33GJ-D	D33	LD	LIC	MERLIN, OR	BLDTL20110527ALR	66.8
No	K33LZ-D	D33	LD	LIC	MYRTLE POINT, OR	BLDTT20120613AAS	62.4
No	KRCW-TV	D33	DT	LIC	SALEM, OR	BMLCDT20070123ABS	262.5
No	K33MF-D	D33	LD	CP	TOKELAND, WA	BNPDTL20100324ABC	396.4
No	KIMA-TV	D33	DT	LIC	YAKIMA, WA	BLCDT20090811ABV	434.0
No	KHWB-LD	D34	LD	APP	EUGENE, OR	BLANK0000029286	106.3
No	K48GC-D	D34	LD	APP	FLORENCE, OR	BLANK0000029589	100.8
Yes	K34IC-D	D34	LD	LIC	GLIDE, OR	BLDTL20120605ABA	32.2
No	K34KJ-D	D34	LD	LIC	HARBOR, OR	BLANK0000013881	151.8

No	K34AI-D	D34	LD	LIC	LA PINE, OR	BLDTT20090821ABT	168.9
No	K34DJ	D34-	LD	CP	PHOENIX, ETC., OR	BLANK0000002386	112.8
No	K34DJ	N34-	TX	LIC	PHOENIX, ETC., OR	BLTT199204081C	112.8
No	K34KL-D	D34	LD	LIC	POWERS, OR	BLDTT20120503ADQ	64.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D33
Mask: Full Service
Latitude: 43 12 2.00 N (NAD83)
Longitude: 123 23 2.00 W
Height AMSL: 435.5 m
HAAT: 0.0 m
Peak ERP: 0.645 kW
Antenna: KAT-1x3 75010210 0.0 deg
Elev Pattern: KAT-1x3 75010210
Mech Tilt: 5.00 @ 350.0 deg

50.6 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.354 kW	215.1 m	31.7 km
45.0	0.318	137.2	26.6
90.0	0.494	171.6	31.0
135.0	0.528	52.1	19.6
180.0	0.532	210.8	33.5
225.0	0.042	213.7	20.8
270.0	0.023	100.1	12.1
315.0	0.195	211.0	28.4

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 164 m

Distance to Canadian border: 558.6 km

Distance to Mexican border: 1287.8 km

Conditions at FCC monitoring station: Livermore CA
Bearing: 166.7 degrees Distance: 624.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 96.5 degrees Distance: 1539.5 km

Study cell size: 0.50 km
Profile point spacing: 0.50 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

No IX check failures found.