

TECHNICAL SUMMARY

TELEVISION STATION KMCC (DTS) LAUGHLIN, NEVADA

DTS1: CHANNEL 32, 1000 KW (MAX-DA), 607 M HAAT
DTS2: CHANNEL 32, 12.5 KW (MAX-DA), 65 M HAAT

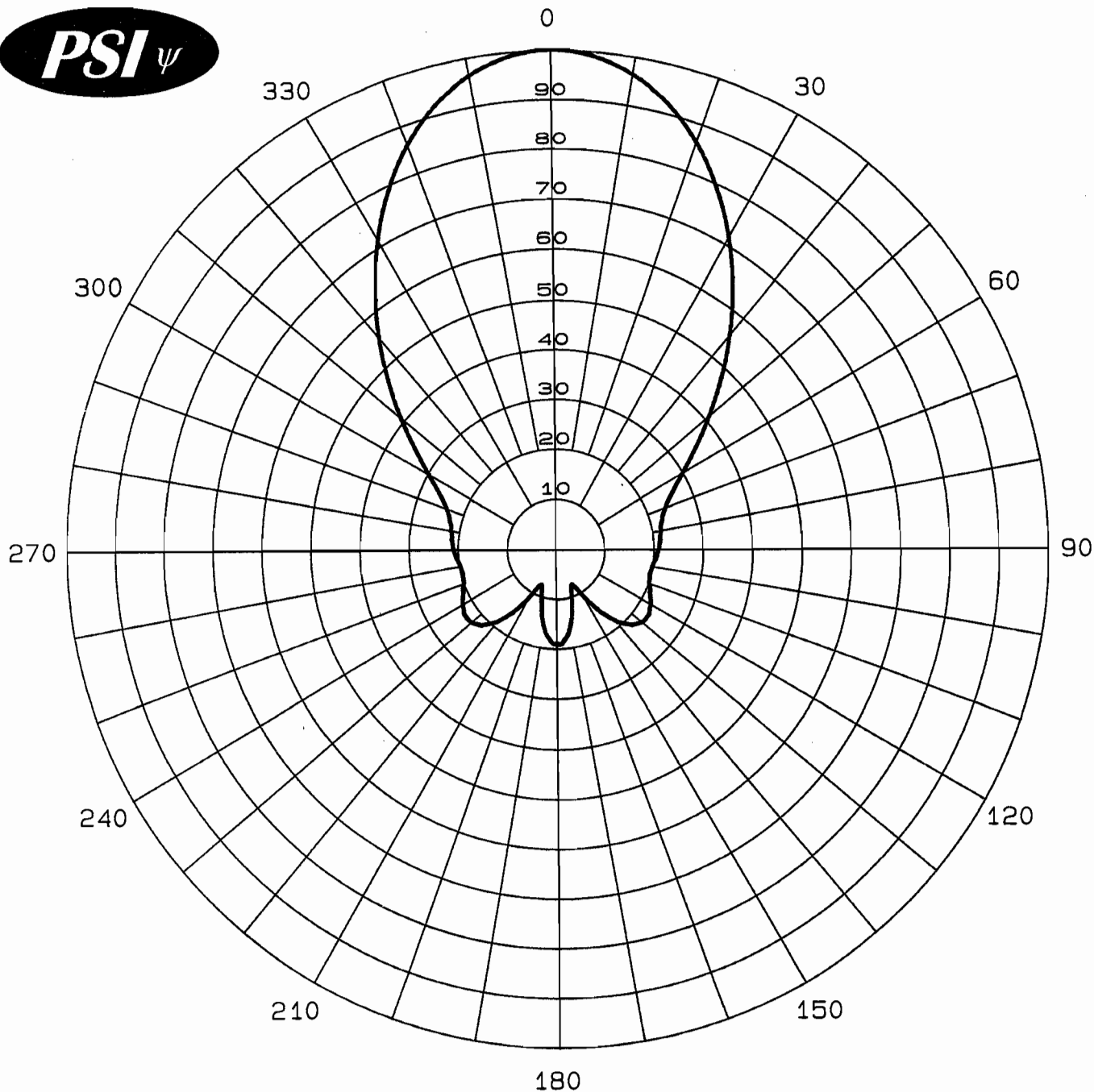
1. The instant application for modification of a licensed distributed transmission system (DTS)^{*} was prepared for KMCC, Laughlin, NV. By means of this application it is proposed to relocate the transmitter site of DTS2. There is no change to DTS1.
2. With respect to DTS2, the transmitting antenna will be relocated to an existing tower located in Las Vegas. The maximum ERP of DTS2 will be increased to 12.5 kW. The antenna height above average terrain (HAAT) of DTS2 will be decreased to 65 m at the new site location.
3. The instant proposal is compliant with the interference protection requirements of the FCC Rules. The results the FCC's *TVStudy* analysis are attached hereto as an exhibit.
4. The instant proposal is compliant with the city coverage requirements of Laughlin. There is no change to the coverage of DTS1, which provides principal community coverage to Laughlin.
5. The proposed DTS system is compliant with the requirements of Section 73.626 of the FCC Rules relating to distributed transmission systems, as amended effective on April 22, 2021. It is noted that the DTS reference point for KMCC has been relocated. Furthermore, it has been previously established that the reference distance for the DTS system is 121.8 km based on the 'largest station in the market' criterion of the FCC Rules.[†]
6. The DTS Compliance Map exhibit for the KMCC DTS system demonstrates contour compliance with the contour limits established in Section 73.626 of the FCC Rules, as amended. Specifically, the proposal meets the F(50,50) contour extension limit distance of 179.1 km and the proposal meets the F(50,10) contour extension limit

^{*} FCC File No. 0000048103.

[†]The largest station in the market has been determined to be KLAS-TV, Las Vegas, NV, Channel 7 (FCC File No. 0000112828).

distance of 292.1 km. These contour extension limit distances are based on the calculation for the 'largest station in the market' reference as shown in the DTS Compliance Map exhibit.

7. The combined coverage of the proposed DTS system meets the coverage requirement of the applicant's authorized service area, which is the KMCC originally licensed facility on Channel 32 under FCC File No. BLCDT-20081114ACI.



Calculated Relative Field
Azimuth Plane Pattern
Low Power UHF Slot
Antenna Type: PSILP
Pattern Type: SL
Directivity: 4.90 (6.90 dB)
Date: 7/1/97
Rev. 0

PROPAGATION SYSTEMS, INC.
PO BOX 113
EBENSBURG, PA. 15931

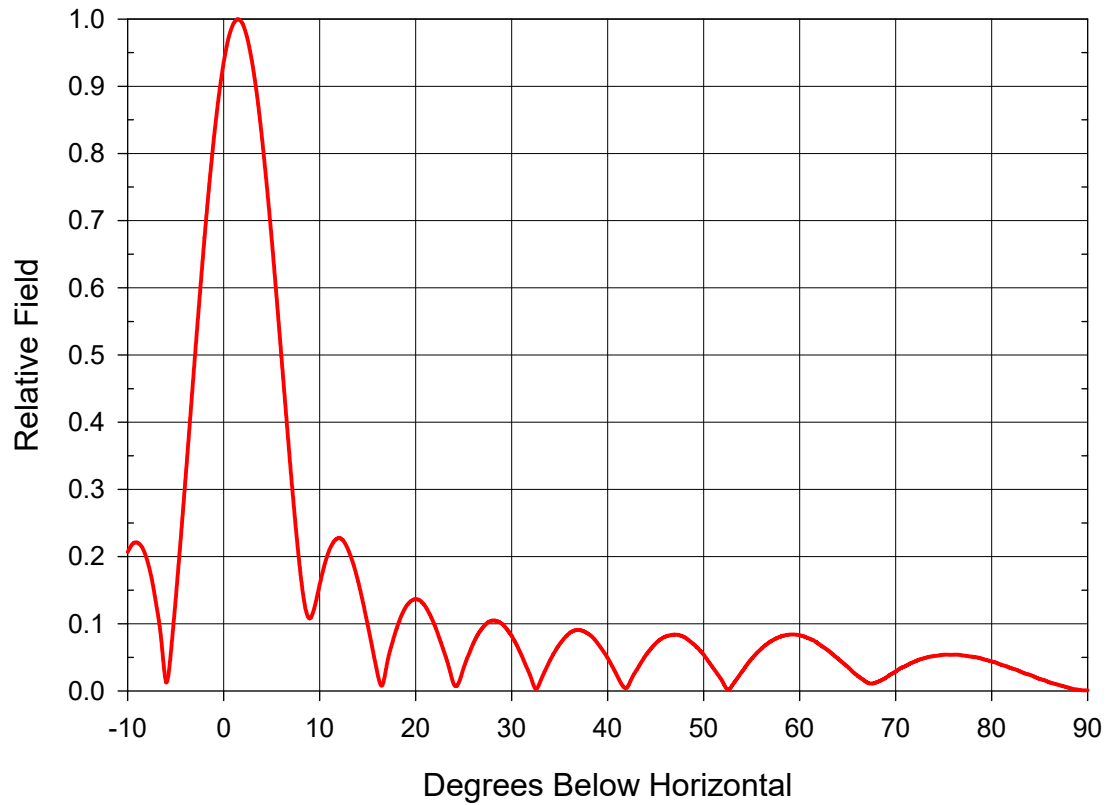
8-BAY

PROPAGATION SYSTEMS INC.

Antenna Model: PSILP8SL

Gain: 45.57 (16.59 dBd)

Angle	Relative Field	Gain	Gain dB
0	1.000	45.57	16.59
10	0.960	42.00	16.23
20	0.860	33.70	15.28
30	0.710	22.97	13.61
40	0.550	13.78	11.39
50	0.410	7.66	8.84
60	0.300	4.10	6.13
70	0.230	2.41	3.82
80	0.210	2.01	3.03
90	0.210	2.01	3.03
100	0.200	1.82	2.61
110	0.200	1.82	2.61
120	0.220	2.21	3.44
130	0.230	2.41	3.82
140	0.200	1.82	2.61
150	0.120	0.66	-1.83
160	0.080	0.29	-5.35
170	0.150	1.03	0.11
180	0.190	1.65	2.16
190	0.150	1.03	0.11
200	0.080	0.29	-5.35
210	0.120	0.66	-1.83
220	0.200	1.82	2.61
230	0.230	2.41	3.82
240	0.220	2.21	3.44
250	0.200	1.82	2.61
260	0.200	1.82	2.61
270	0.210	2.01	3.03
280	0.210	2.01	3.03
290	0.230	2.41	3.82
300	0.300	4.10	6.13
310	0.410	7.66	8.84
320	0.550	13.78	11.39
330	0.710	22.97	13.61
340	0.860	33.70	15.28
350	0.960	42.00	16.23



Antenna: PSI, model PSI8SL-32

Based on manufacturer supplied data.

TRANSMITTING ANTENNA ELEVATION PLANE PATTERN (GRAPH - RELATIVE FIELD)

TELEVISION BROADCAST STATION KMCC (DTS2)
LAUGHLIN, NEVADA
CHANNEL 32

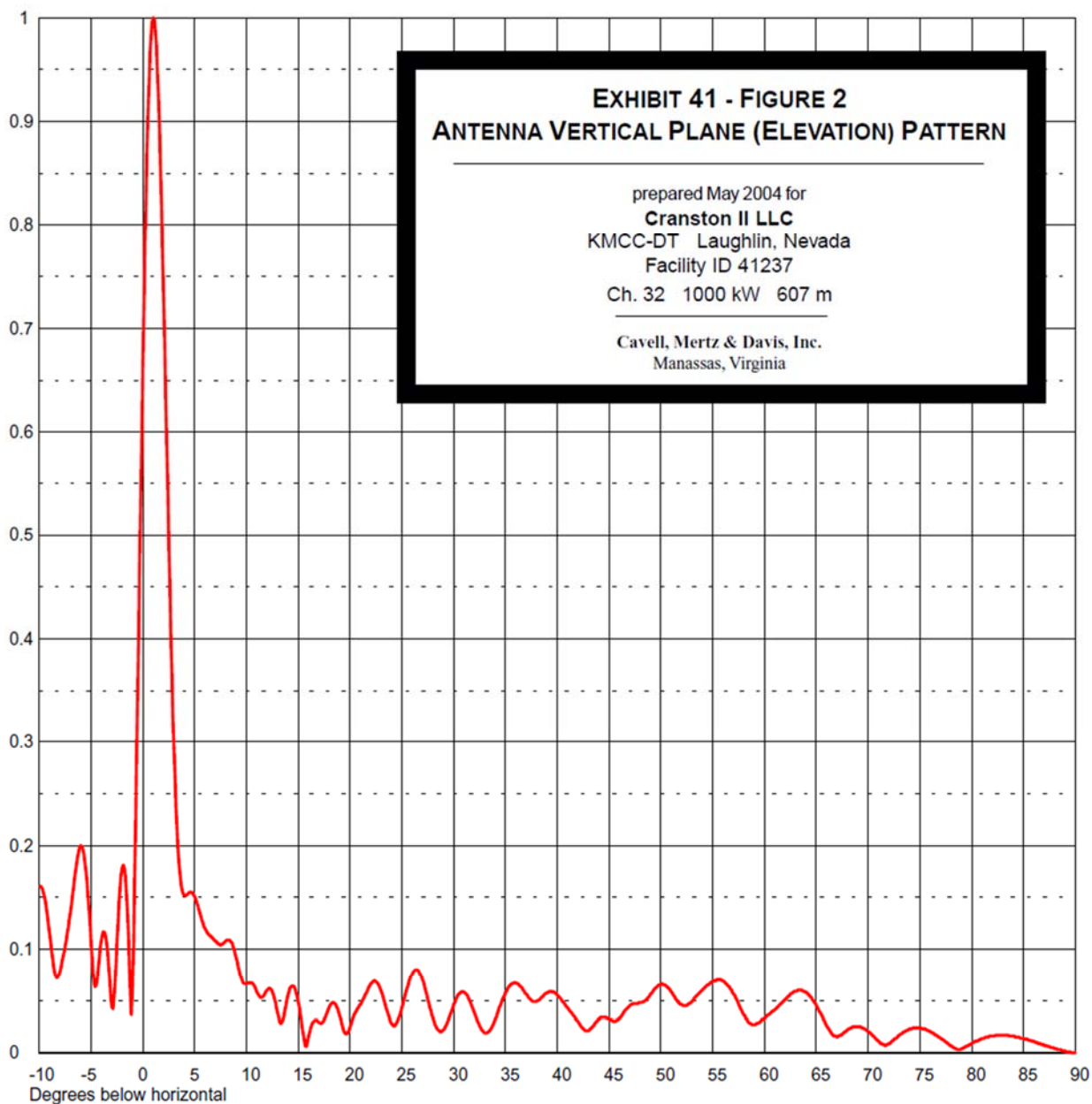
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



Date	25 May 2004	Channel	32
Call Letters			
Location	Dolan Springs		
Customer			
Antenna Type	TFU-30DSC S180		

ELEVATION PATTERN

RMS Gain at Main Lobe	25.5 (14.07 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	11.3 (10.53 dB)	Frequency	581.00 MHz
Calculated / Measured	Calculated	Drawing #	30Q255100-90



TVSTUDY ANALYSIS FOR KMCC – DTS, LAUGHLIN, NV (CHANNEL 32)(RELOCATION OF DTS2)

tvstudy v2.2.5 (4uoc83)

Database: localhost, Study: kmcc050, Model: Longley-Rice

Study build station data: LMS TV 2022-06-01

Proposal: KMCC050 D32 DD APP LAUGHLIN, NV
File number: kmcc050
Facility ID: 41237
Station data: User record
Record ID: 4643
Country: U.S.
Zone: II

Ref. lat.: 35 42 56.60 N

Ref. long.: 114 29 24.90 W

DTS sites: 2

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	DKCFG	D32	DT	BL	FLAGSTAFF, AZ	DTVBL35104	263.4 km
No	KVPT	D32	DT	LIC	FRESNO, CA	BLANK0000063002	444.6
No	KNLA-CD	D32	DC	LIC	LOS ANGELES, CA	BLANK0000068695	365.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied, DTS site # 1:

Channel: D32
Latitude: 35 39 7.00 N (NAD83)
Longitude: 114 18 43.80 W
Height AMSL: 1648.0 m
HAAT: 607.0 m
Peak ERP: 1000 kW
Antenna: DIE-TFU-30DSCS180 (ID 113077) 0.0 deg
Elev Pattn: DIE-TFU-30DSCS180
Elec Tilt: 1.00

40.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	861 kW	463.6 m	111.4 km
45.0	545	415.8	102.7
90.0	102	566.2	99.4
135.0	216	304.3	84.8
180.0	136	684.1	107.1
225.0	655	757.3	125.3
270.0	901	795.8	130.1
315.0	996	706.5	127.4

Database HAAT does not agree with computed HAAT

Database HAAT: 607 m Computed HAAT: 587 m

ERP exceeds maximum

ERP: 1000 kW ERP maximum: 342 kW

Record parameters as studied, DTS site # 2:

Channel: D32
Latitude: 36 7 44.80 N (NAD83)
Longitude: 115 11 28.40 W
Height AMSL: 752.8 m
HAAT: 65.0 m
Peak ERP: 12.5 kW
Antenna: PSI-PSILP8SL-32 (ID 113078) 40.0 deg
Elev Pattn: PSI-PSILP8SL-32
Elec Tilt: 1.50

40.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	3.78 kW	88.9 m	46.4 km
45.0	12.0	171.1	58.8
90.0	2.10	194.8	51.8
135.0	0.525	131.5	40.7

TVSTUDY ANALYSIS FOR KMCC – DTS, LAUGHLIN, NV (CHANNEL 32)(RELOCATION OF DTS2)

180.0	0.500	54.3	31.2
225.0	0.361	-31.3	23.3
270.0	0.661	-88.5	26.1
315.0	0.551	-3.7	25.2

DTS proposal coverage is within reference facility and distance limit

Distance to Canadian border: 1430.6 km

Distance to Mexican border: 328.2 km

Conditions at FCC monitoring station: Livermore CA

DTS site # 1 Bearing: 291.4 degrees Distance: 702.0 km

DTS site # 2 Bearing: 288.9 degrees Distance: 609.4 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

DTS site # 1 Bearing: 55.3 degrees Distance: 936.2 km

DTS site # 2 Bearing: 60.0 degrees Distance: 974.7 km

Study cell size: 2.00 km

Profile point spacing: 1.00 km

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

Maximum new IX to LPTV: 2.00%

----- Interference to DTVBL35104 BL scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	DKCFG	D32	DT	BL	FLAGSTAFF, AZ	DTVBL35104	
Undesireds:	KMCC	D32	DD	BL	LAUGHLIN, NV	DTVBL41237	246.2 km
	KMCC050	D32	DD	APP	LAUGHLIN, NV	kmcc050	263.4
	KOLD-TV	D32	DT	LIC	TUCSON, AZ	BLCDT20030911AAI	321.2
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
34231.5	330,129	28288.0	241,255	28131.7	241,104	28131.7 241,104	0.00 0.00
Undesired				Total IX	Unique IX, before	Unique IX, after	
KMCC D32 DD BL		120.5		28	120.5 28		
KMCC050 D32 DD APP		120.5		28		120.5 28	
KOLD-TV D32 DT LIC		35.9		123	35.9 123	35.9 123	

----- Interference to proposal scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KMCC050	D32	DD	APP	LAUGHLIN, NV	kmcc050	
Undesireds:	DKCFG	D32	DT	BL	FLAGSTAFF, AZ	DTVBL35104	263.4 km
Service area		Terrain-limited		IX-free		Percent IX	
39788.3	2,064,592	26995.8	2,009,949	26706.7	2,009,938	1.07 0.00	
Undesired				Total IX	Unique IX	Prcnt Unique IX	
DKCFG D32 DT BL		289.1		11	289.1 11	1.07 0.00	

