

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of SYNCOM MEDIA GROUP, INC., licensee of digital Low Power Television station KLPD-LD, licensed on Channel 30 in Denver, Colorado, in support of its Application for Construction Permit to specify a new transmitter site.

It is proposed to mount an MCI directional panel antenna at the 8.6-meter level of an existing 11.9-meter structure near Boulder, Colorado. The proposed site is located only 25.8 kilometers from the present KLPD-LD site. Exhibit B is a map upon which the predicted 51 dBu service contour of this new proposal is plotted.

Azimuth pattern information for the proposed antenna are included in Exhibit C. Exhibit D contains the summary results from a TVStudy interference study, which was conducted using a cell size and increment spacing of 1.0 kilometers. It concludes that the proposed KLPD-LD facility meets the Commission's de minimis interference criteria to all co-channel and adjacent-channel post-repack full-power and Class A and LPTV/translator facilities, except for one. While the study shows significant predicted interference between the facility proposed herein and that of authorized KAVC-LD, Channel 30 in Loveland, Colorado (LMS-0000029989), KAVC-LD has a number of problems associated with its operation that may result in cancellation of the station's license, as shown in a separate attachment to this application. Therefore, interference to the KAVC-LD authorization can be ignored.

A detailed power density calculation is provided in Exhibit E.

Since no change in the overall height or location of the existing tower is proposed herein, the Federal Aviation Administration has not been notified of this application. the Federal

In addition, Communications Commission issued Antenna Structure Registration Number 1296450 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K" and "F".

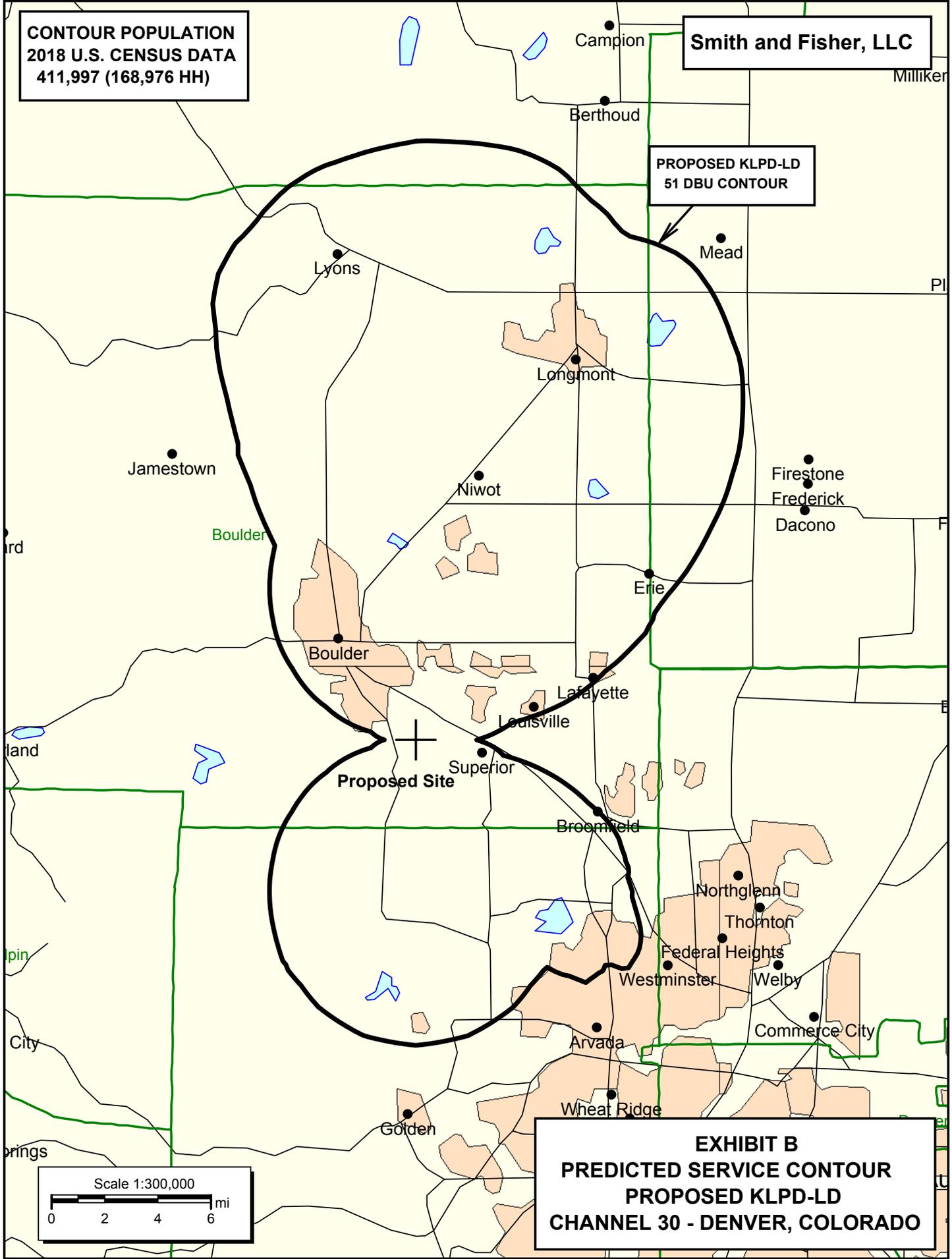
KEVIN T. FISHER

January 16, 2020

**CONTOUR POPULATION
2018 U.S. CENSUS DATA
411,997 (168,976 HH)**

Smith and Fisher, LLC

**PROPOSED KLPD-LD
51 DBU CONTOUR**



**EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED KLPD-LD
CHANNEL 30 - DENVER, COLORADO**

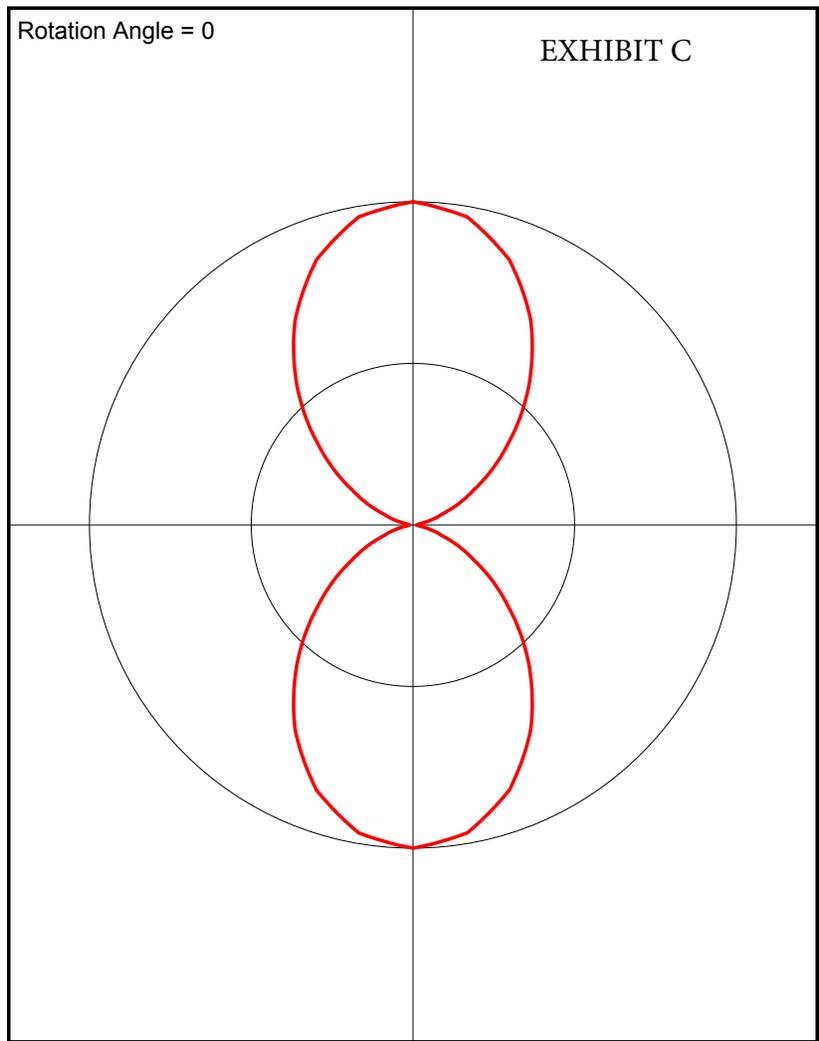
Antenna Pattern

Pre-Rotation Antenna Pattern....

| Azimuth (deg) | Relative Field |
|---------------|----------------|
| 0.0 | 1.0 |
| 10.0 | 0.967 |
| 20.0 | 0.872 |
| 30.0 | 0.729 |
| 40.0 | 0.556 |
| 50.0 | 0.378 |
| 60.0 | 0.218 |
| 70.0 | 0.094 |
| 80.0 | 0.021 |
| 90.0 | 0.01 |
| 100.0 | 0.021 |
| 110.0 | 0.094 |
| 120.0 | 0.218 |
| 130.0 | 0.378 |
| 140.0 | 0.556 |
| 150.0 | 0.729 |
| 160.0 | 0.872 |
| 170.0 | 0.967 |
| 180.0 | 1.0 |
| 190.0 | 0.967 |
| 200.0 | 0.872 |
| 210.0 | 0.729 |
| 220.0 | 0.556 |
| 230.0 | 0.378 |
| 240.0 | 0.218 |
| 250.0 | 0.094 |
| 260.0 | 0.021 |
| 270.0 | 0.01 |
| 280.0 | 0.021 |
| 290.0 | 0.094 |
| 300.0 | 0.218 |
| 310.0 | 0.378 |
| 320.0 | 0.556 |
| 330.0 | 0.729 |
| 340.0 | 0.872 |
| 350.0 | 0.967 |

Rotation Angle = 0

EXHIBIT C



TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED KLPD-LD
CHANNEL 30 – DENVER, COLORADO

Study created: 2020.01.16 17:15:17

Study build station data: LMS TV 2019-12-10

Proposal: KLPD-LD D30 LD LIC DENVER, CO

File number: BLANK0000088112

Facility ID: 67539

Station data: User record

Record ID: 688

Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

| IX | Call | Chan | Svc | Status | City, State | File Number | Distance |
|-----|---------|------|-----|--------|----------------------|-------------------|----------|
| No | KZCS-LP | N23z | TX | LIC | COLORADO SPRINGS, CO | BLTTL20021218AAJ | 138.4 km |
| No | K27CB | N27+ | TX | LIC | FRASER, ETC., CO | BLTT19890609IM | 48.7 |
| No | K28GE-D | N28+ | TX | LIC | WOODLAND PARK, CO | BLTTL19991203AAV | 108.9 |
| No | K50LP-D | D29 | LD | CP | ANTON, CO | BLANK0000054482 | 160.0 |
| No | KTLO-LP | D29+ | LD | CP | COLORADO SPRINGS, CO | BLANK0000052546 | 138.3 |
| No | K29HM-D | D29 | LD | LIC | LAKE GEORGE, CO | BLDTT20101001ACF | 104.3 |
| Yes | KDEN-TV | D29 | DT | APP | LONGMONT, CO | BLANK0000036134 | 25.5 |
| No | KDEN-TV | D29 | DT | LIC | LONGMONT, CO | BLCDT20100317AAM | 30.9 |
| No | KSTF | D29 | DT | APP | SCOTTSBLUFF, NE | BLANK0000036040 | 260.9 |
| No | K30NL-D | D30 | LD | CP | ARRIBA, CO | BNPDTL20100514AFE | 178.4 |
| No | NEW | D30 | LD | APP | ASPEN, CO | BNPDTL20090825BXX | 161.0 |
| No | K30JQ-D | D30 | LD | LIC | CARBONDALE, CO | BLDTT20091221AAW | 194.2 |
| No | K38MK-D | D30 | LD | CP | CHEYENNE WELLS, CO | BLANK0000071831 | 263.0 |
| Yes | K30JM-D | D30 | LD | LIC | COLORADO SPRINGS, CO | BLDTL20100430ACU | 138.3 |
| No | K30EJ-D | D30 | LD | LIC | CRESTED BUTTE, CO | BLDTT20100301AAH | 193.6 |
| Yes | KZCO-LD | D30 | LD | LIC | DENVER, CO | BLANK0000072463 | 25.7 |
| Yes | KZCO-LD | D30 | LD | CP | DENVER, CO | BLANK0000067700 | 25.7 |
| No | K30CR | N30- | TX | LIC | FRASER, ETC., CO | BLTT19890609IK | 48.7 |
| Yes | KAVC-LD | D30 | LD | CP | LOVELAND, CO | BLANK0000029989 | 6.2 |
| No | K30PY-D | D30 | LD | LIC | PARLIN, CO | BLANK0000068628 | 204.9 |
| No | K30FO-D | D30 | LD | LIC | PEETZ, CO | BLDTT20110808ABH | 197.4 |
| No | K30GO-D | D30 | LD | LIC | PLEASANT VALLEY, CO | BLDTT20111122AML | 270.1 |

| | | | | | | |
|-----|---------|------|--------|-----------------------|-------------------|-------|
| No | K30HA-D | D30 | LD LIC | YUMA, CO | BLDTT20110613AAC | 205.3 |
| No | K30NM-D | D30 | LD CP | GOODLAND, KS | BNPDTL20100514AFZ | 305.9 |
| No | K30GJ-D | D30 | LD LIC | COLFAX, NM | BLDTT20120307ABY | 377.9 |
| No | K30EK-D | D30 | LD LIC | DULCE & LUMBERTON, NM | BLDTT20111117ATH | 364.4 |
| No | K30LY-D | D30 | LD LIC | MANILA, ETC, UT | BLDTT20131125BYD | 372.3 |
| No | K30KM-D | D30 | LD LIC | VERNAL, ETC, UT | BLDTT20120112ABL | 338.1 |
| No | K30LW-D | D30 | LD CP | CASPER, WY | BNPDTL20100510ACT | 361.4 |
| Yes | KGWN-TV | D30 | DT LIC | CHEYENNE, WY | BLCDT20070327AEQ | 128.0 |
| Yes | KHDT-LD | D31 | LD LIC | DENVER, CO | BLANK0000001552 | 25.7 |
| Yes | KTVD | D31 | DT LIC | DENVER, CO | BLANK00000080552 | 25.5 |
| No | K31LY-D | D31 | LD CP | CHEYENNE, WY | BNPDTL20100510AEV | 133.9 |
| No | K33BV | N33+ | TX LIC | FRASER, ETC., CO | BLTT19890609IJ | 48.7 |

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D30

Mask: Full Service

Latitude: 39 57 35.10 N (NAD83)

Longitude: 105 12 55.50 W

Height AMSL: 1760.0 m

HAAT: 0.0 m

Peak ERP: 1.50 kW

Antenna: MCI Peanut 0.0 deg

Elev Pattn: Generic

50.3 dBu contour:

| Azimuth | ERP | HAAT | Distance |
|---------|---------|---------|----------|
| 0.0 deg | 1.50 kW | 169.5 m | 36.9 km |
| 45.0 | 0.327 | 165.8 | 28.9 |
| 90.0 | 0.000 | 126.8 | 3.8 |
| 135.0 | 0.327 | 64.8 | 19.6 |
| 180.0 | 1.50 | -57.2 | 19.4 |
| 225.0 | 0.327 | -439.1 | 13.1 |
| 270.0 | 0.000 | -422.5 | 2.0 |
| 315.0 | 0.327 | -56.8 | 13.1 |

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: -56 m

Distance to Canadian border: 1004.7 km

Distance to Mexican border: 916.4 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 77.3 degrees Distance: 583.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 349.5 degrees Distance: 17.9 km
ERP: 1.39 kW Field strength: 82.9 dBu, 14.0 mV/m

Study cell size: 1.00 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%

**IX check failure to BLANK0000029989 CP scenario 1, 39.66% interference caused
**IX check failure to BLANK0000029989 CP scenario 2, 39.66% interference caused
**IX check failure to BLANK0000029989 CP scenario 3, 39.66% interference caused
**IX check failure to BLANK0000029989 CP scenario 4, 39.66% interference caused

---- Below is IX received by proposal BLANK0000088112 ----

**MX with BLANK0000036134 APP scenario 1, 64.32% interference received
Proposal receives 64.32% interference from scenario 2
**MX with BLANK0000036134 APP scenario 3, 64.32% interference received
Proposal receives 64.32% interference from scenario 4

POWER DENSITY CALCULATION
PROPOSED KLPD-LD
CHANNEL 30 – DENVER, COLORADO

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Denver facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 1.5 kW, an antenna radiation center 8.6 meters above ground, assuming a vertical relative field value of 20 percent at the steeper elevation angles for the proposed MCI panel antenna, maximum power density two meters above ground of 0.046 mW/cm^2 is calculated to occur north and south of the base of the structure. Since this is only 12.1 percent of the 0.38 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 30 (566-572 MHz), a grant of this proposal may be considered a minor environmental action with respect to public and occupational exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.