

**Engineering Statement
Channel Change and Relocation Application
WWDP Norwell, MA
Proposed New Channel 36
June 10, 2022**

In this application, the licensee of WWDP proposes to change from its licensed High-VHF channel 10 to UHF channel 36. WWDP is only one of four full-service stations in the Boston, MA Market that is not on a UHF channel and the only VHF station that is not affiliated with a major network. The other VHF stations being WGBH channel 5 Boston, MA (PBS), WMUR-TV Manchester, NH (ABC) and WENH-TV channel 11 (PBS). It is further noted that the market has UHF stations affiliated with the ABC and PBS networks giving viewers a UHF option for those networks.

Since the overwhelming majority of stations in the market operate on UHF channels, WWDP is at a significant disadvantage with regard to over-the-air reception in that antennas designed for UHF reception are very inefficient at VHF and viewers are not likely to be motivated to acquire a VHF compatible antenna for a single station. In addition, it has been well documented that indoor reception of VHF signals is more difficult than UHF and therefore might require an outdoor antenna for reception of that single channel. In view of this and to improve service availability, WWDP proposes to move to UHF channel 36.

The power, antenna pattern and location proposed here for channel 36 seeks to provide the maximum service while providing the required protection to other stations. The facility will be relocated to a taller tower to improve service and to be essentially co-located with an adjacent channel 35 to mitigate interference. The facility will operate with an effective radiated power (ERP) of 1,000 kW into a directional antenna. As can be seen on the provided service contour map (Appendix B), the predicted City Grade contour fully encompasses the city of license, Norwell, MA. An interference study using the FCC's TVStudy software with the default settings shows the proposed facility would not cause any non-de minimis interference to other stations requiring protection. A copy of the TVStudy interference analysis is provided in Appendix A.

A comparison of the standard predicted service contours shows both areas where the proposed new contour exceeds that of the current licensed facility as well as areas where the opposite is true. The area within the current licensed channel 10 contour that is outside the proposed channel 36 contour can be considered loss area. However, it is known the actual service does not necessarily stop at the arbitrary boundary imposed by the traditionally computed service contours. Therefore, a further analysis was performed using the FCC's TVStudy software to determine the predicted service provided by the proposed channel 36 facility within the traditional noise-limited-service contour (NLC) of the licensed channel 10 facility. The result of that study, as depicted in the coverage maps provided below (Appendices C and D), shows the predicted service of the proposed UHF facility covers the majority of that provided by the VHF facility. For clarity, the Appendix D plot excludes cells that have zero population, and those cells are shown in black. It is noted that a large portion of those cells are over water.

It is further shown in the Appendix E map that the predicted loss areas are within the noise limited contours of numerous other full-service stations. There are 31 full-service stations (Listed in Appendix F) whose noise limited contour covers some or all of the predicted loss area. It should also be pointed out that the overall predicted service from the proposed channel 36 facility within the licensed channel 10 NLC exceeds that of the currently licensed facility by almost 25,000 people.

In view of the above and the supporting information provided in the appendices, it is believed that WWDP is justified in requesting this change and that it would be in the public interest to grant its request.

William R. Meintel
Senior Partner
Meintel, Sgrignoli & Wallace LLC

Appendix A

Database: localhost, Study: 01575_05312022_WWDP_23671, Model: Longley-Rice
Start: 2022.05.31 11:56:50

Study created: 2022.05.31 11:56:50

Study build station data: LMS TV 2022-05-31

Proposal: WWDP D36 DT APP NORWELL, MA
File number: 01575_05312022_WWDP_23671
Facility ID: 23671
Station data: User record
Record ID: 1527
Country: U.S.
Zone: I

Search options:

Non-U.S. records included

Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WHDH	D35	DT	LIC	BOSTON, MA	BLANK0000088833	1.7 km
No	WRGB	D35	DT	LIC	SCHENECTADY, NY	BLANK0000185806	230.1
Yes	WFSB	D36	DT	LIC	HARTFORD, CT	BLANK0000159868	142.5
Yes	WMEA-TV	D36	DT	LIC	BIDDEFORD, ME	BLANK0000108722	127.9
No	WMGM-TV	D36	DT	LIC	WILDWOOD, NJ	BLANK0000035355	462.2
Yes	WCBS-TV	D36	DT	LIC	NEW YORK, NY	BLANK0000086487	291.4
No	WCFE-TV	D36	DT	LIC	PLATTSBURGH, NY	BLANK0000151172	340.2
No	WSPX-TV	D36	DT	LIC	SYRACUSE, NY	BLANK0000081964	397.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D36
Latitude: 42 18 37.00 N (NAD83)
Longitude: 71 14 12.00 W
Height AMSL: 362.0 m

HAAT: 318.4 m
Peak ERP: 1000 kW
Antenna: 20220414_165738_Pat_CF_AzimuthHorizontal 160.0 deg
Elev Pattn: WWDP_20220526_121306_ElevationPattern
Elec Tilt: 2.00

40.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	2.60 kW	316.2 m	59.4 km
45.0	10.5	344.4	68.8
90.0	167	324.7	84.7
135.0	793	322.0	97.5
180.0	882	305.3	96.6
225.0	214	310.2	84.9
270.0	10.2	310.3	66.5
315.0	1.33	313.8	55.7

Proposal 25.86 dBu contour does not cross Canadian border
Distance to Canadian border: 301.2 km

Distance to Mexican border: 2959.8 km

Conditions at FCC monitoring station: Belfast ME
Bearing: 35.5 degrees Distance: 294.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 276.7 degrees Distance: 2832.3 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 BLANK0000159868 LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WFSB	D36	DT	LIC	HARTFORD, CT	BLANK0000159868	
Undesireds:	WWDP	D36	DT	APP	NORWELL, MA	01575_05312022_WWDP_23	142.5 km

WHDH	D35	DT	LIC	BOSTON, MA	BLANK0000088833	144.1
WNJU	D35	DT	LIC	LINDEN, NJ	BLANK0000079780	155.3
WRGB	D35	DT	LIC	SCHENECTADY, NY	BLANK0000185806	137.0
WMEA-TV	D36	DT	LIC	BIDDEFORD, ME	BLANK0000108722	245.1
WMGM-TV	D36	DT	LIC	WILDWOOD, NJ	BLANK0000035355	338.0
WCBS-TV	D36	DT	LIC	NEW YORK, NY	BLANK0000086487	155.3
WITF-TV	D36	DT	CP	HARRISBURG, PA	BLANK0000035782	375.8

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
26990.6 4,752,788	24251.4 4,370,519	19705.7 3,589,297	19557.2 3,572,569	0.75 0.47

Undesired	Total IX	Unique IX, before	Unique IX, after
WWDP D36 DT APP 518.0 81,001	148.5 16,728		
WHDH D35 DT LIC 140.1 29,794	28.0 6,293	4.0 1,048	
WNJU D35 DT LIC 314.6 151,585	0.0 0	0.0 0	
WRGB D35 DT LIC 84.0 1,115	39.9 524	39.9 524	
WMEA-TV D36 DT LIC 44.1 3,027	8.0 410	0.0 0	
WMGM-TV D36 DT LIC 24.3 12,167	0.0 0	0.0 0	
WCBS-TV D36 DT LIC 4465.8 773,909	3982.9 588,035	3793.9 572,984	

Interference to BLANK0000108722 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WMEA-TV	D36	DT	LIC	BIDDEFORD, ME	BLANK0000108722	
Undesireds:	WWDP	D36	DT	APP	NORWELL, MA	01575_05312022_WWDP_23	127.9 km
	WHDH	D35	DT	LIC	BOSTON, MA	BLANK0000088833	127.4
	WFSB	D36	DT	LIC	HARTFORD, CT	BLANK0000159868	245.1

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
14916.3 902,755	13895.8 853,857	13732.7 844,203	13720.7 842,646	0.09 0.18

Undesired	Total IX	Unique IX, before	Unique IX, after
WWDP D36 DT APP 31.9 3,187	12.0 1,557		
WHDH D35 DT LIC 12.0 3,093	8.0 2,372	4.0 1,744	
WFSB D36 DT LIC 155.1 7,282	151.1 6,561	139.2 6,280	

Interference to BLANK0000086487 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCBS-TV	D36	DT	LIC	NEW YORK, NY	BLANK0000086487	
Undesireds:	WWDP	D36	DT	APP	NORWELL, MA	01575_05312022_WWDP_23	291.4 km

WFSB	D36	DT	LIC	HARTFORD, CT	BLANK0000159868	155.3
WTTG	D36	DT	LIC	WASHINGTON, DC	BLANK0000152125	327.7
WMGM-TV	D36	DT	LIC	WILDWOOD, NJ	BLANK0000035355	187.8
WITF-TV	D36	DT	CP	HARRISBURG, PA	BLANK0000035782	244.7

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
38374.6 22,087,789	35920.3 21,511,236	32574.3 20,809,492	32574.3 20,809,492	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WWDP D36 DT APP 8.0	0	0.0 0	
WFSB D36 DT LIC 2939.0	603,129	2391.6 468,027	2387.6 468,027
WTTG D36 DT LIC 132.2	43,434	8.0 588	8.0 588
WMGM-TV D36 DT LIC 830.4	165,895	351.0 61,893	351.0 61,893
WITF-TV D36 DT CP 136.2	72,582	28.0 26,640	28.0 26,640

Interference to BLANK0000086487 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WCBS-TV	D36	DT	LIC	NEW YORK, NY	BLANK0000086487	
Undesireds:	WWDP	D36	DT	APP	NORWELL, MA	01575_05312022_WWDP_23	291.4 km
	WFSB	D36	DT	LIC	HARTFORD, CT	BLANK0000159868	155.3
	WTTG	D36	DT	LIC	WASHINGTON, DC	BLANK0000152125	327.7
	WMGM-TV	D36	DT	LIC	WILDWOOD, NJ	BLANK0000035355	187.8
	WITF-TV	D36	DT	LIC	HARRISBURG, PA	BLANK0000039358	244.7

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
38374.6 22,087,789	35920.3 21,511,236	32590.3 20,814,783	32590.3 20,814,783	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WWDP D36 DT APP 8.0	0	0.0 0	
WFSB D36 DT LIC 2939.0	603,129	2403.6 474,742	2399.6 474,742
WTTG D36 DT LIC 132.2	43,434	8.0 588	8.0 588
WMGM-TV D36 DT LIC 830.4	165,895	355.0 61,893	355.0 61,893
WITF-TV D36 DT LIC 88.1	56,723	12.0 21,349	12.0 21,349

Interference to proposal scenario 1
27.07% interference received

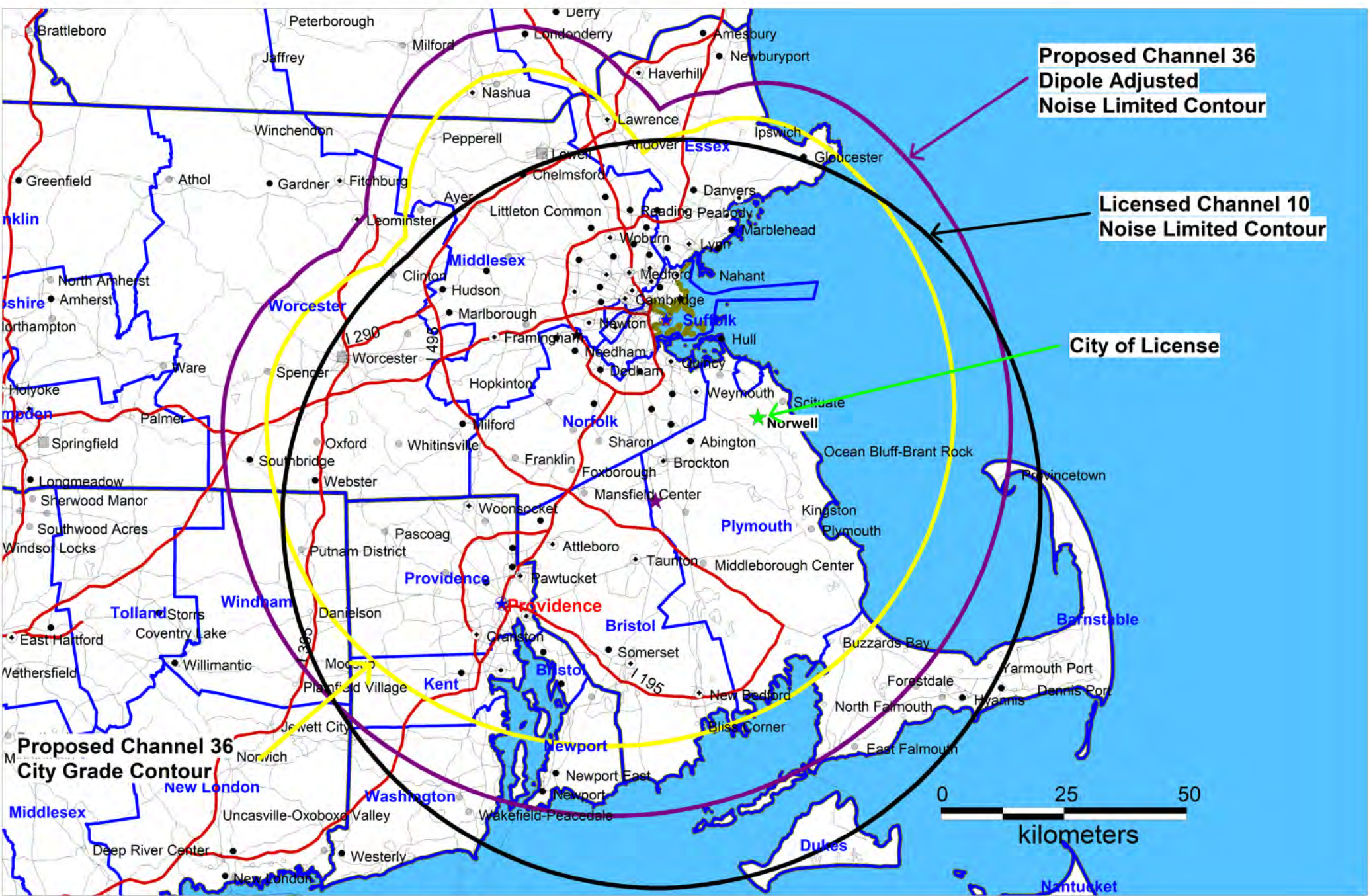
Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WWDP	D36	DT	APP	NORWELL, MA	01575_05312022_WWDP_23	
Undesireds:	WHDH	D35	DT	LIC	BOSTON, MA	BLANK0000088833	1.7 km

WFSB	D36	DT	LIC	HARTFORD, CT	BLANK0000159868	142.5
WMEA-TV	D36	DT	LIC	BIDDEFORD, ME	BLANK0000108722	127.9
WCBS-TV	D36	DT	LIC	NEW YORK, NY	BLANK0000086487	291.4

Service area		Terrain-limited		IX-free		Percent IX
18976.3	6,509,527	17149.6	6,223,276	10079.3	4,538,714	41.23 27.07

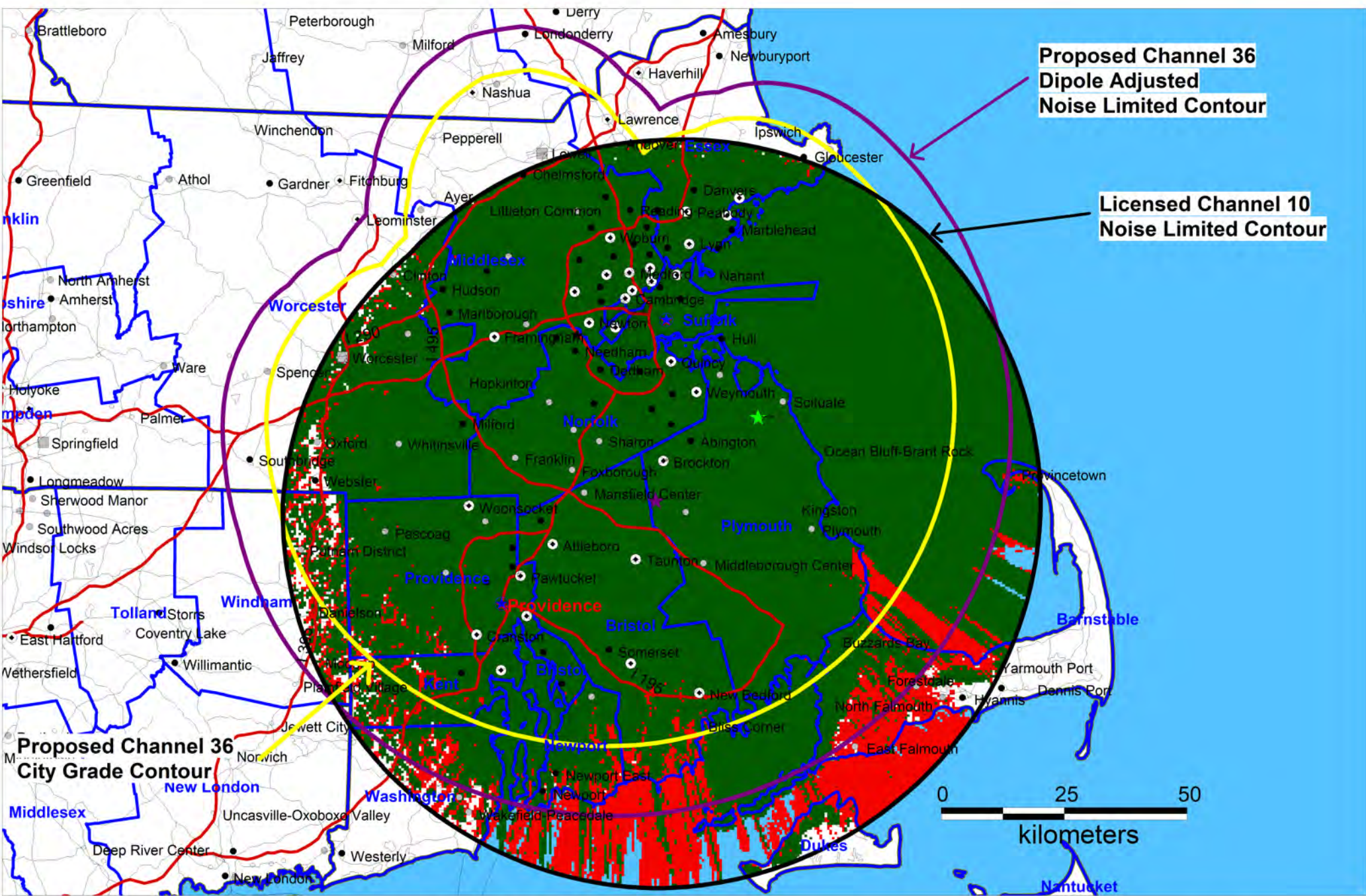
Undesired		Total IX		Unique IX	Prcnt Unique IX
WHDH D35 DT LIC	5649.7	1,481,062	3443.5	1,101,784	20.08 17.70
WFSB D36 DT LIC	3008.4	390,188	534.8	57,963	3.12 0.93
WMEA-TV D36 DT LIC	2375.2	434,126	132.6	47,384	0.77 0.76
WCBS-TV D36 DT LIC	378.6	26,497	0.0	0	0.00 0.00

Appendix B



WWDP Licensed Channel 10 and Proposed Channel 36 Predicted Service Contours

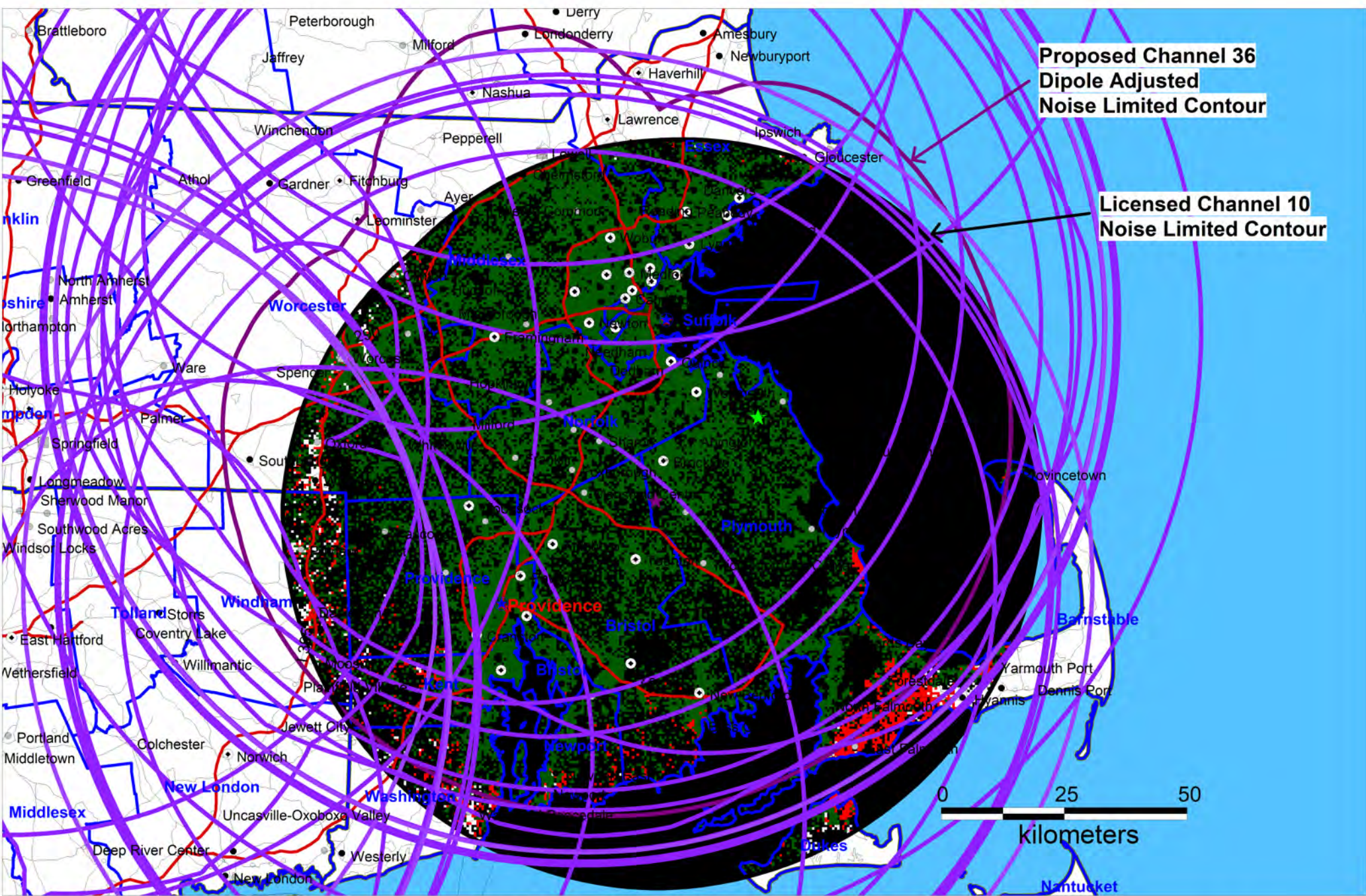
Appendix C



WWDP Proposed Channel 36 Predicted Service ERP 1,000 kW RCAMSL 362 m Ant:Alive Telecom Pattern CF vs Licensed Channel 10 inside the Licensed NLC

Appendix D

Appendix E



WWDP Proposed Channel 36 Predicted Service to Populated Cells

ERP 1,000 kW RCAMSL 362 m Ant:Alive Telecom Pattern CF

vs Licensed Channel 10 inside the Licensed NLC

**Channel 36 Predicted Service
Inside Licensed Channel 10 NLC**

**Channel 10 Predicted Service
Area not served by Channel 36**

Cells with 0 Population

Noise Limited Contours of 31 Other Full-Service Stations that Cover All or Portions of (Red) Loss Area

Appendix F

Full Service Stations Providing Service to Potential WWDP Channel 36 Loss Area

Call	City	State	Channel	Facility ID	Call	City	State	Channel	Facility ID
WSBE-TV	Providence	RI	2	56092	WLNE-TV	New Bedford	MA	24	22591
WGBH-TV	Boston	MA	5	72099	WJAR	Providence	RI	25	50780
WPRI-TV	Providence	RI	7	47404	WGGB-TV	Springfield	MA	26	25682
WEDN	Norwich	DT	9	13607	WUNI	Marlborough	MA	27	60551
WMUR-TV	Manchester	NH	9	73292	WHPX-TV	New London	CT	28	51980
WTNH	New Haven	CT	10	74109	WNEU	Merrimack	NH	29	51864
WWLP	Springfield	MA	11	6868	WEDH	Hartford	CT	30	13602
WENH-TV	Durham	NH	11	69237	WVIT	New Britain	CT	31	74170
WNAC-TV	Providence	RI	12	73311	WGBX-TV	Boston	MA	32	72098
WGBY-TV	Springfield	MA	13	72096	WCCT-TV	Waterbury	CT	33	14050
WPXQ-TV	Newport	RI	17	50063	WCVB-TV	Boston	MA	33	65684
WUTF-TV	Worcester	MA	19	30577	WTIC-TV	Hartford	CT	34	147
WBZ-TV	Boston	MA	20	25456	WFXT	Boston	MA	34	6463
WSBK-TV	Boston	MA	21	73982	WHDH	Boston	MA	35	72145
WPX-TV	Boston	MA	22	7692	WFSB	Hartford	CT	36	53115
WPXG-TV	Concord	NH	23	48406					