

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant

CITADEL BROADCASTING COMPANY

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☐

Station License

☒

Direct Measurement of Power

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
WTRX		1330	Unlimited	Night 1.0	Day 5.0

2. Station location

State Michigan	City or Town Flint
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3. Transmitter location

State Michigan	County Genesee	City or Town Burton	Street address (or other identification) 3076 E. Bristol Road
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4. Main studio location

State Michigan	County Genesee	City or Town Flint	Street address (or other identification) G4511 Miller Road, Flint 48507
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5. Remote control point location (specify only if authorized directional antenna)

State Michigan	County Genesee	City or Town Flint	Street address (or other identification) G4511 Miller Road, Flint 48507
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6. Has type-approved stereo generating equipment been installed?

☐

Yes

☒

No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68?

☒

Yes

☐

No

☐

Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed.

Exhibit No.
No Change

8. Operating constants:

RF common point or antenna current (in amperes) without modulation for night system 4.65	RF common point or antenna current (in amperes) without modulation for day system 8.8
Measured antenna or common point resistance (in ohms) at operating frequency Night 50 Day 50	Measured antenna or common point reactance (in ohms) at operating frequency Night 0.0 Day 0.0

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
#1 South	+154.0	+139.0	0.565	0.520	NA	NA
#2 Center	0.0	0.0	1.000	1.000	NA	NA
#3 North	-146.0	-148.0	0.210	0.160	NA	NA

Manufacturer and type of antenna monitor:

POTOMAC INSTRUMENTS AM-19 (204)

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9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator 1 tapered & 2 self-supporting, vertical radiators	Overall height in meters of radiator above base insulator, or above base, if grounded. (3N) 108.23 (2C & 1S) 60.97	Overall height in meters above ground (without obstruction lighting) (3N) 111.7 (2C & 1S) 61.4	Overall height in meters above ground (include obstruction lighting) (3N) 112.7 (2C & 1S) 62.4	If antenna is either top loaded or sectionalized, describe fully in an Exhibit. <div style="border: 1px solid black; padding: 2px; text-align: center;">Exhibit No. NA</div>
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Excitation ☒ Series ☐ Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude 42 ° 58 ' 24 "	West Longitude 083 ° 39 ' 02 "
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If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits.

Exhibit No.
#1

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system.

Exhibit No.
No Change

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

Installation of the WFBE-FM antenna, transmission line & isolator required changes to the operating parameters for the daytime & nighttime arrays (See Partial Proof of Performance)

11. Give reasons for the change in antenna or common point resistance.

No change in the daytime or nighttime common point resistance or reactance

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type) Russell C. Harbaugh, Jr.	Signature (check appropriate box below) 
Address (include ZIP Code) 27451 Everett Street Southfield, MI 48076	Date March 26, 2010
	Telephone No. (Include Area Code) 248-557-7274

☐ Technical Director

☒ Registered Professional Engineer

☐ Chief Operator

☐ Technical Consultant

☐ Other (specify)

**APPLICATION FOR DIRECT
MEASUREMENT OF POWER**

PARTIAL PROOF OF PERFORMANCE

RADIO STATION

WTRX-AM 1330 KHZ

FLINT, MI

5 KW DAY / 1 KW NIGHT DA-2

REPORT PREPARED BY THE ENGINEERING FIRM

**MEDIA CONTROL, INCORPORATED
27451 EVERETT STREET
SOUTHFIELD, MI 48076
(248) 557-7274**

ENGINEERING STATEMENT

BACKGROUND

This engineering statement was prepared on behalf of the Citadel Broadcasting Company, licensee of standard broadcast station WTRX-AM, Flint, Michigan, and in support of their application for direct measurement of power and Form 302 filing. WTRX-AM is presently operating under a Special Temporary Authorization granted on January, 11, 2010 to operate with parameters at variance while maintaining monitor points within licensed limits. FCC Construction Permit BPH-20070518ADJ calls for the installation of the WFBE-FM antenna and transmission line on the existing WTRX-AM north tower which required an adjustment to the WTRX-AM facility. This report presents a description of the WTRX-AM facility, the WFBE-FM installation, and the results of the WTRX-AM proof of performance of the daytime and nighttime arrays.

WTRX-AM OPERATIONS

WTRX-AM, Flint, MI is presently authorized directional daytime and nighttime operation on 1330 kHz with a power of 5.0 kilowatts and 1.0 kilowatt, respectively. The NAD 27 coordinates of the WTRX-AM antenna site are as follows:

Latitude North 42-58-24.0

Longitude West 83-39-02.0

WFBE-FM INSTALLATION SITE

The NAD27 coordinates of the WFBE-FM installation site are as follows:

Latitude North 42-58-26

Longitude West 83-39-01

These are the coordinates of the North tower in the WTRX-AM three (3) tower antenna system. The height of the existing self-supporting type tower is 112.7 meters above ground level and was unchanged.

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WTRX-AM ADJUSTMENTS

The installation of the WFBE-FM antenna, transmission line and isolator at the base of the AM tower required a minor adjustment to antenna tuning network and common point matching network.

WTRX-AM COMMON POINT MEASUREMENTS

Following the installation of the WFBE-FM antenna, transmission line and isolator at the base of the AM tower, the WTRX-AM common point was measured and adjusted to 50 Ohms resistance and zero Ohms reactance using the stations installed Delta Impedance Bridge.

WTRX-AM MEASUREMENT PROCEDURES

WTRX-AM field strength measurements were obtained along five (5) radials of the daytime array and six (6) radials of the nighttime array. These radials contain the licensed monitor points and a major lobe radial for the station, per Commission Rules, Section 73.154 (a). Measurements were obtained before and after the installation of the WFBE-FM antenna and transmission line on the tower and the isolator at the base of the tower. For the nighttime measurements, WTRX-AM switched to its nighttime operation during daytime hours.

Measurements were obtained at accessible locations noted in the WTRX-AM 1978 full proof of performance. GPS navigation was used to maintain an accurate track along the radials and a description of each measurement location recorded.

FIELD STRENGTH MEASUREMENT ANALYSIS

The field strength measurement data (See Tables) were analyzed by radial bearing using the logarithmic average of the ratio of the field strength at each measurement location. The summary of the data is shown as a percentage change. The WTRX-AM licensed monitor points are shown to be within FCC licensed limits.

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FIELD METER

The FIM-21 field meter, Serial #1222, calibrated May 19, 2008, was used for these measurements. The meter was checked against the WTRX-AM meter and found to be in close agreement. The field meter was operated in accordance with the manufacturer's specifications.

CONCLUSION

The minor variations in the comparison of the "before" and "after" installation measurements can be attributed to network adjusted parameters, changes in the environment at the measurement locations, meter tolerance and minor variations in the meter positioning. It is our opinion that the WTRX-AM facility is presently operating within the FCC authorized daytime and nighttime pattern limits. The prior antenna monitor phase and loop sample parameters must be amended in accordance with the parameters indicated in the daytime and nighttime summary tables.

AFFIDAVIT

The field intensity readings were made by the undersigned. The information contained in this report is true and correct according to my knowledge and belief. My qualifications are a matter of record with the FCC.

A handwritten signature in dark ink, reading "Russell C. Harbaugh, Jr.", is written over a horizontal line.

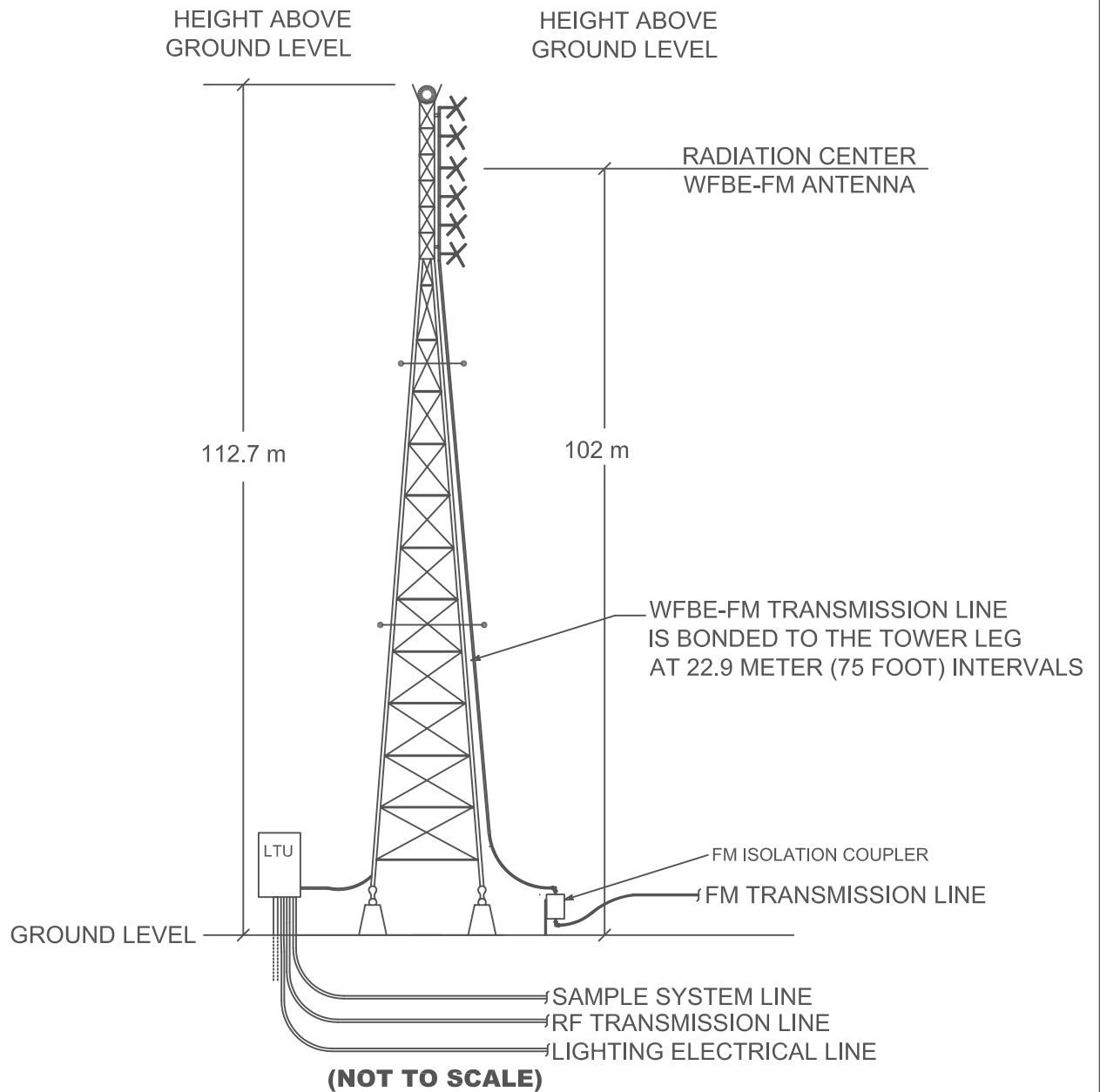
Russell C. Harbaugh, Jr., P.E.

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EXHIBIT #1

TOWER #3 (NORTH) -- TAPERED,
SELF-SUPPORTED, SERIES EXCITED
VERTICAL RADIATOR

LIGHTING CHOKE MOUNTED ON LTU WITH
BEACON FLASHER MOUNTED ON TOWER



WTRX-AM 1330 KHZ FLINT, MI
#3 NORTH TOWER CONFIGURATION
3/22/2010

TOWER SKETCH

MEDIA CONTROL, INCORPORATED

(LAYOUT ASSEMBLED FROM STATION RECORDS)

SUMMARY OF DAYTIME FIELD INTENSITY MEASUREMENTS**WTRX-AM - FLINT, MICHIGAN****1330 KHZ -- 5.0 KW DAY / 1.0 KW NIGHT -- DA-2**

MONITOR POINT SUMMARY				
RADIAL AZIMUTH	POINT DISTANCE	BEFORE READING	AFTER READING	MAXIMUM FIELD
(DEGREES)	(km)	(MV/M)	(MV/M)	(MV/M)
130	5.50	16.0	15.0	28.2
163	3.38	20.5	18.0	30.6
190	5.31	25.0	23.5	27.8
275	4.68	11.0	10.0	16.8

CHANGE POST to PRE CONSTRUCTION		
RADIAL (DEGREES)	POST/PRE AVERAGE	CHANGE (PERCENT)
010	1.0244	2.44%
130	0.9369	-6.31%
163	0.9555	-4.45%
190	1.0392	3.92%
275	1.0182	1.82%

DAYTIME PARAMETERS		
TOWER	PHASE	LOOP
	(DEGREES)	RATIO
#1 South	+139	0.520
#2 Center	0.0	1.000
#3 North	-148	0.160

WTRX-AM			DAYTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 010 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/4/2010		DATE: 3/2/2010		
5KW DA-D ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u>		BY: <u>Russell C. Harbaugh, Jr.</u>		
			28 Deg & light snow				
POINT NO.	DISTANCE		Time	Pre-Construction	Time	Post-Construction	LOG RATIO (DB)
	(MILES)	(KM)		DA-D (mV/m)		DA-D (mV/m)	
14	2.32	3.73	0945	195.0	1311	190.0	-0.0113
15	2.50	4.02	0954	183.0	1314	185.0	0.0047
16	2.90	4.67	0958	135.0	1320	145.0	0.0310
17	3.06	4.92	1003	129.0	1323	135.0	0.0197
18	3.27	5.26	1008	120.0	1330	125.0	0.0177
20	4.22	6.79	1023	89.0	1340	96.0	0.0329
21	6.74	10.84	1029	49.5	1351	47.0	-0.0225
22	7.72	12.42	1035	38.0	1358	39.0	0.0113
Major Lobe Radial				Average of Log Ratios:			0.0105
				Antilog of Average Log Ratio:			1.0244
				CHANGE =			2.44%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
14	Between Pingree Avenue and Evergreen Parkway at 3535 Gloucester Drive, 2/3 down from Evergreen Parkway						43-00-25 83-38-33
15	#3611 Worchester Dr., north side of street in middle of driveway						43-00-34 83-38-30
16	#1117 Barrington Dr., north side of street in middle of driveway						43-01-02 83-38-22
17	#1006 Burlington Dr., north side of street in middle of driveway						43-01-10 83-38-13
18	Gorey Avenue at Mailbox #3941						43-01-10 83-38-20
20	Rite Aid parking lot 30 feet east of Center Road & 20 feet south of entrance						43-02-02 83-38-02
21	SE corner of school building on Crosby Rd. & 10' east of 3 shrubs						43-04-10 83-37-42
22	0.3 mile west of N. Genessee Road at 4354 Carpenter Road at driveway						43-05-01 83-37-24

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WTRX-AM			DAYTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 130 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/4/2010		DATE: 3/2/2010		
5KW DA-D ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u>		BY: <u>Russell C. Harbaugh, Jr.</u>		
			28 Deg & light snow				
POINT NO.	DISTANCE		Time	Pre-Construction	Time	Post-Construction	LOG RATIO (DB)
	(MILES)	(KM)		DA-D (mV/m)		DA-D (mV/m)	
11	2.80	4.51	1112	29.0	1008	28.0	-0.0152
12	2.89	4.65	1118	21.0	1006	20.0	-0.0212
13	3.03	4.88	1128	19.5	1004	17.5	-0.0470
14 (MP)	3.42	5.50	1134	16.0	1001	15.5	-0.0138
15	4.52	7.27	1139	9.0	0952	8.2	-0.0404
16	5.28	8.50	1144	6.4	0947	5.6	-0.0580
17	6.80	10.94	1152	4.6	0941	4.4	-0.0193
18	7.72	12.42	1200	3.8	0932	3.7	-0.0116
(MP) Maximum = 28.2 mV/m				Average of Log Ratios:			-0.0283
				Antilog of Average Log Ratio:			0.9369
				CHANGE =			-6.31%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
11	Middle of driveway of #5112 North Georgetown Road						42-56-55 83-36-42
12	Mail box at #5349 Georgetown Rd. at end of driveway						42-56-47 83-36-23
13	10' east of mailbox at #5231 Hill Rd. on south side of Hill Rd.						42-56-43 83-36-15
14 (MP)	#6147 Belsay on west side across from mailbox						42-56-29 83-35-53
15	#6309 Perry Rd. west of Belsay Rd & ASF mailbox at east side of Deer Run Farms entrance						42-55-53 83-34-53
16	0.1 miles east of Vassar Rd. - North side of Burpee at white gate near the "Stop Ahead" sign at bridge						42-55-28 83-34-13
17	McCandlish Rd. 1.3 miles east of Vassar Rd. on north side of road across from "Warning Buried Cable" sign & 18" culvert						42-54-37 83-32-52
18	#1058 Gale Rd. 0.1 mile south of Green Rd. across from mailbox						42-54-07 83-32-00

WTRX-AM			DAYTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 163 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/4/2010		DATE: 3/2/2010		
5KW DA-D ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u> 28 Deg & light snow		BY: <u>Russell C. Harbaugh, Jr.</u>		
POINT NO.	DISTANCE		Time	Pre-Construction	Time	Post-Construction	LOG RATIO (DB)
	(MILES)	(KM)		DA-D (mV/m)		DA-D (mV/m)	
10 (MP)	2.10	3.38	1245	20.5	1154	18.0	-0.0565
11	2.40	3.86	1253	16.0	1148	15.5	-0.0138
12	2.75	4.42	1302	11.0	1144	13.0	0.0726
15	4.10	6.60	1307	10.5	1133	12.0	0.0580
17	4.66	7.50	1314	8.2	1119	6.2	-0.1214
18	5.17	8.32	1323	7.2	1102	6.8	-0.0248
19	6.23	10.02	1330	6.2	1050	6.0	-0.0142
20	7.84	12.61	1337	4.0	1045	3.5	-0.0580
(MP) Maximum = 30.6 mV/m				Average of Log Ratios:			-0.0198
				Antilog of Average Log Ratio:			0.9555
				CHANGE =			-4.45%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
10 (MP)	Maple Cemetary on south side of Hill Rd. at "SHAW" headstone 60' south of Hill Rd.						42-56-40 83-38-16
11	Between #3413 & #3437 Esson Dr. 100' E of #3437 mailbox 15' west of fence & north side of Esson Dr.						42-56-25 83-38-15
12	Middle of driveway to #239 Brainard Rd. on north side of road						42-56-08 83-38-06
15	Old Bridge Road in front of Grand Ridge Galleria consignment store						42-55-40 83-37-54
17	#4233 McCandlish Rd. opposite front door						42-54-32 83-37-22
18	#4311 Cook Rd. opposite driveway						42-54-06 83-37-10
19	#4421 Baldwin Rd. opposite driveway at mailbox						42-53-14 83-36-47
20	On Evans Rd. at intersection with Buckskin Trail at top of hill						42-51-53 83-36-19

WTRX-AM			DAYTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 190 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/4/2010		DATE: 3/2/2010		
5KW DA-D ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u>		BY: <u>Russell C. Harbaugh, Jr.</u>		
			28 Deg & light snow				
POINT NO.	DISTANCE		Time	Pre-Construction	Time	Post-Construction	LOG RATIO (DB)
	(MILES)	(KM)		DA-D (mV/m)		DA-D (mV/m)	
3	1.71	2.75	1415	49.0	1608	45.0	-0.0370
9	2.50	4.02	1422	33.0	1613	34.0	0.0130
11 (MP)	3.30	5.31	1430	25.0	1620	23.5	-0.0269
12	3.60	5.79	1335	20.0	1623	20.0	0.0000
13	4.08	6.56	1340	21.6	1628	18.0	-0.0792
14	5.10	8.21	1346	11.2	1637	15.5	0.1411
15	6.12	9.85	1359	8.7	1643	10.0	0.0605
16	7.70	12.39	1409	6.5	1651	7.5	0.0621
	(MP) Maximum = 27.8 mV/m			Average of Log Ratios:			0.0167
				Antilog of Average Log Ratio:			1.0392
				CHANGE =			3.92%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
3	Silverton Road west od S. Saginaw Road and across street from driveway to log cabin						42-56-55 83-39-20
9	End of driveway to #6343 Springdale Avenue						42-56-17 83-39-30
11 (MP)	IFO #2282 Reid Rd. 200' east of Porter Rd. in driveway						42-55-36 83-39-40
12	Porter Road in driveway to house #7282						42-55-20 83-39-44
13	50 feet east of mailbox at #2190 Grand Blanc Rd. on south side opposite barn						42-54-55 83-39-49
14	ASF 2100 East Cook Road						42-54-02 83-40-01
15	ASF entrance to Spring Oak Subdivision at Baldwin Road and Pere Marquette Drive sign						42-53-10 83-40-17
16	#1366 East Thompson Rd. 0.1 mile - west of Gage Rd. & 50' west of driveway						42-51-50 83-40-33

WTRX-AM			DAYTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 275 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/4/2010		DATE: 3/2/2010		
5KW DA-D ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u> 28 Deg & light snow		BY: <u>Russell C. Harbaugh, Jr.</u>		
POINT NO.	DISTANCE		Time	Pre-Construction	Time	Post-Construction	LOG RATIO (DB)
	(MILES)	(KM)		DA-D (mV/m)		DA-D (mV/m)	
13 (MP)	2.91	4.68	1500	11.0	1514	10.0	-0.0414
14	3.92	6.31	1507	9.6	1506	9.2	-0.0185
15	4.20	6.76	1513	6.0	1506	6.5	0.0348
16	5.03	8.09	1518	3.8	1443	4.0	0.0223
17	5.60	9.01	1523	3.2	1443	3.5	0.0389
18	6.20	9.98	1527	3.1	1437	3.2	0.0138
19	6.75	10.86	1533	2.8	1431	2.5	-0.0492
21	9.20	14.80	1542	1.3	1424	1.5	0.0621
	(MP) Maximum = 16.8 mV/m			Average of Log Ratios:			0.0078
				Antilog of Average Log Ratio:			1.0182
				CHANGE =			1.82%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
13 (MP)	Southgate Drive center of road in front of house #3430						42-58-36 83-42-26
14	Van Slyke Road 60 feet south of Stephens Avenue on east side curb						42-58-38 83-42-47
15	#3347 Torrey at entrance to Central Transport facility						42-58-43 83-43-57
17	Miller Road at ABC Warehouse entrance						42-58-49 83-45-36
18	Linden Rd. 0.35 mi north on Miller Rd. opposite center entrance to Genessee Valley Mall east side of grass island next to firehydrant at Burlington Coat Factore store						42-58-52 83-46-18
19	South Dye at large "W" sign at first parking space						42-58-54 83-46-56
21	At mailbox to 3097 Elms						42-59-00 83-48-42

MEDIA CONTROL, INCORPORATED

SUMMARY OF NIGHTTIME FIELD INTENSITY MEASUREMENTS**WTRX-AM - FLINT, MICHIGAN****1330 KHZ -- 5.0 KW DAY / 1.0 KW NIGHT -- DA-2**

MONITOR POINT SUMMARY				
RADIAL AZIMUTH	POINT DISTANCE	BEFORE READING	AFTER READING	MAXIMUM FIELD
(DEGREES)	(km)	(MV/M)	(MV/M)	(MV/M)
089	2.10	33.0	28.5	59.7
105	3.78	7.25	6.2	19.5
190	3.68	12.0	9.4	15.0
255	3.18	3.2	3.2	5.2
286	2.59	16.0	17.0	24.0

CHANGE POST to PRE CONSTRUCTION		
RADIAL (DEGREES)	POST/PRE AVERAGE	CHANGE (PERCENT)
010	0.9905	-0.95%
089	0.9776	-2.24%
105	1.0191	1.91%
190	0.9565	-4.35%
255	0.9792	-2.08%
286	1.0256	2.56%

NIGHTTIME PARAMETERS		
TOWER	PHASE	LOOP
	(DEGREES)	RATIO
#1 South	+154	0.565
#2 Center	0.0	1.000
#3 North	-146	0.210

WTRX-AM			NIGHTTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 010 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/5/2010		DATE: 3/4/2010		
1KW DA-N ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u>		BY: <u>Russell C. Harbaugh, Jr.</u>		
			26 Deg & light snow				
POINT NO.	DISTANCE			Pre-Construction		Post-Construction	LOG RATIO
	(MILES)	(KM)	Time	DA-N (mV/m)	Time	DA-N (mV/m)	(DB)
14	2.32	3.73	1510	121.0	1048	120	-0.0036
15	2.50	4.02	1458	110.0	1051	109	-0.0040
16	2.90	4.67	1452	108.0	1056	105	-0.0122
17	3.06	4.92	1447	100.0	1059	98.0	-0.0088
18	3.27	5.26	1440	84.0	1103	83.0	-0.0052
20	4.22	6.79	1434	67.0	1108	68.5	0.0096
21	6.74	10.84	1426	31.2	1117	33.0	0.0244
22	7.72	12.42	1416	27.0	1122	25.0	-0.0334
	Major Lobe Radial			Average of Log Ratios:			-0.0042
				Antilog of Average Log Ratio:			0.9905
				CHANGE =			-0.95%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
14	Between Pingree Avenue and Evergreen Parkway at 3535 Gloucester Drive, 2/3 down from Evergreen Parkway						43-00-25 83-38-33
15	#3611 Worchester Dr., north side of street in middle of driveway						43-00-34 83-38-30
16	#1117 Barrington Dr., north side of street in middle of driveway						43-01-02 83-38-22
17	#1006 Burlington Dr., north side of street in middle of driveway						43-01-10 83-38-13
18	Gorey Avenue at Mailbox #3941						43-01-10 83-38-20
20	Rite Aid parking lot 30 feet east of Center Road & 20 feet south of entrance						43-02-02 83-38-02
21	SE corner of school building on Crosby Rd. & 10' east of 3 shrubs						43-04-10 83-37-42
22	0.3 mile west of N. Genessee Road at 4354 Carpenter Road at driveway						43-05-01 83-37-24

WTRX-AM			NIGHTTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 089 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/6/2010		DATE: 3/4/2010		
1KW DA-N ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u>		BY: <u>Russell C. Harbaugh, Jr.</u>		
			26 Deg & light snow				
POINT NO.	DISTANCE			Pre-Construction		Post-Construction	LOG RATIO
	(MILES)	(KM)	Time	DA-N (mV/m)	Time	DA-N (mV/m)	(DB)
6 (MP)	1.82	2.93	1100	16.0	1245	14.5	-0.0428
7	2.46	3.96	1109	12.0	1252	12	0.0000
9	2.85	4.59	1114	10.0	1256	10.0	0.0000
10	3.05	4.91	1134	11.0	1259	11.5	0.0193
12	3.83	6.16	1140	8.6	1302	8.0	-0.0314
13	4.84	7.79	1146	6.0	1307	5.6	-0.0300
14	6.28	10.10	1152	4.2	1311	4.0	-0.0212
16	7.28	11.71	1159	3.1	1316	3.3	0.0272
	(MP) Maximum = 24.0 mV/m			Average of Log Ratios:			-0.0099
				Antilog of Average Log Ratio:			0.9776
				CHANGE =			-2.24%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
6 (MP)	East side of Genessee Road at lot line between #4023 and #4055						42-58-26 83-36-50
7	Intersection of Day Street and Montcalm IFO #4032						42-58-29 83-36-05
9	IFO #4037 Dallas Street						42-58-30 83-35-23
10	IFO #4037 Dallas Street						42-58-30 83-34-28
12	ASF #4025 Vassar Road						42-58-29 83-33-17
13	Mailbox of #4054 Irish Road						42-58-32 83-31-35
14	ASF #4040 Atlas Road						42-58-30 83-30-24
16	ASF #4071 S. State Road (M-15)						42-58-34 83-28-28

WTRX-AM FLINT, MICHIGAN			NIGHTTIME FIELD INTENSITY MEASUREMENTS		RADIAL = 105 DEGREES		
1330 KHZ 1KW DA-N ARRAY			DATE: 1/6/2010 BY: <u>Russell C. Harbaugh, Jr.</u> 26 Deg & light snow		DATE: 3/4/2010 BY: <u>Russell C. Harbaugh, Jr.</u>		
POINT NO.	DISTANCE (MILES) (KM)		Time	Pre-Construction DA-N (mV/m)	Time	Post-Construction DA-N (mV/m)	LOG RATIO (DB)
7	1.92	3.09	1445	18.5	1355	20	0.0339
8	2.97	4.78	1438	12.0	1351	12.5	0.0177
9	3.31	5.33	1430	11.7	1349	11.5	-0.0075
10	4.00	6.44	1422	10.2	1346	9.0	-0.0544
11 (MP)	5.00	8.05	1417	10.6	1341	9.2	-0.0615
12	5.39	8.67	1410	5.2	1336	8.0	0.1871
13	6.30	10.14	1357	4.8	1329	5.8	0.0822
14	7.62	12.26	1350	6.5	1324	4.8	-0.1317
(MP) Maximum = 13.9 mV/m				Average of Log Ratios:			0.0082
				Antilog of Average Log Ratio:			1.0191
				CHANGE =			1.91%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
7	Mailbox to #4312 Genessee						42-57-59 83-36-48
8	Belsay and Hedgerow Circle at Maple Pointe sign						42-57-45 83-35-35
9	Maple Pointe Trail at Neighborhood Watch sign						42-57-42 83-35-19
10	ASF driveway to #5132 Vassar Road						42-57-29 83-34-26
11 (MP)	West side and ASF driveway to #5257 Irish Road						42-57-17 83-33-17
12	ASF from mailbox to 8200 Tewksberry Place						42-57-10 83-32-49
13	Intersection of Atlas Road and Executive Farms Lane						42-57-01 83-31-47
14	Route M-15 in middle of parking lot of 1ST Baptist Church						42-56-40 83-30-19

MEDIA CONTROL, INCORPORATED

WTRX-AM			NIGHTTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 190 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/6/2010		DATE: 3/5/2010		
1KW DA-N ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u>		BY: <u>Russell C. Harbaugh, Jr.</u>		
			26 Deg & light snow				
POINT NO.	DISTANCE (MILES) (KM)		Time	Pre-Construction DA-N (mV/m)	Time	Post-Construction DA-N (mV/m)	LOG RATIO (DB)
3	1.71	2.75	0945	19.0	1110	18.5	-0.0116
9	2.50	4.02	0951	17.5	1105	16.0	-0.0389
11 (MP)	3.30	5.31	0954	13.0	1100	11.5	-0.0532
12	3.60	5.79	0955	11.0	1058	10.0	-0.0414
13	4.08	6.56	1001	10.0	1055	9.0	-0.0458
14	5.10	8.21	1008	8.5	1047	8.6	0.0051
15	6.12	9.85	1015	6.8	1029	7.0	0.0126
16	7.70	12.39	1026	5.0	1038	5.2	0.0170
(MP) Maximum = 21.6 mV/m				Average of Log Ratios:			-0.0195
				Antilog of Average Log Ratio:			0.9560
				CHANGE =			-4.40%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
3	Silverton Road west od S. Saginaw Road and across street from driveway to log cabin						42-56-55 83-39-20
9	End of driveway to #6343 Springdale Avenue						42-56-17 83-39-30
11 (MP)	IFO #2282 Reid Road 200' east of Porter Rd. in driveway						42-55-36 83-39-40
12	Porter Road in driveway to house #7282						42-55-20 83-39-44
13	50 feet east of mailbox at #2190 Grand Blanc Rd. on south side opposite barn						42-54-55 83-39-49
14	ASF 2100 East Cook Road						42-54-02 83-40-01
15	ASF entrance to Spring Oak Subdivision at Baldwin Road and Pere Marquette Drive sign						42-53-10 83-40-17
16	#1366 East Thompson Rd. 0.1 mile - west of Gage Rd. & 50' west of driveway						42-51-50 83-40-33

WTRX-AM			NIGHTTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 255 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/5/2010		DATE: 3/4/2010		
1KW DA-N ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u>		BY: <u>Russell C. Harbaugh, Jr.</u>		
			26 Deg & light snow				
POINT NO.	DISTANCE		Time	Pre-Construction	Time	Post-Construction	LOG RATIO (DB)
	(MILES)	(KM)		DA-N (mV/m)		DA-N (mV/m)	
8	2.25	3.62	1149	14.0	1614	19	0.1326
9 (MP)	2.80	4.51	1143	12.2	1607	15.2	0.0955
10	3.30	5.31	1138	11.5	1604	13.0	0.0532
11	4.33	6.97	1132	9.4	1558	11.0	0.0683
12	5.35	8.61	1128	9.0	1550	6.5	-0.1413
13	6.38	10.27	1121	6.5	1541	6.8	0.0196
14	8.45	13.60	1115	4.5	1535	3.1	-0.1619
16	10.85	17.46	1105	3.1	1528	2.3	-0.1392
(MP) Maximum = 25.9 mV/m				Average of Log Ratios:			-0.0091
				Antilog of Average Log Ratio:			0.9792
				CHANGE =			-2.08%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
8	Between driveways of 4279 & 4291 Fenton Road north of Maple road on Fenton						42-57-58 83-41-33
9 (MP)	Middle of the street in front of house #4428 Carmenwood Drive						42-57-44 83-42-11
10	Corner of Westmore Drive and Van Slyke Road						42-57-39 83-42-45
11	ASF driveway to house #5068 Torrey Road						42-57-25 83-43-56
12	0.5 mile north of W. Hill Road next to "One Lane Bridge" on Jennings Road						42-57-11 83-45-06
13	Center of driveway to 5325 Floria Street west side of road past bend in road						42-56-52 83-46-10
14	SE corner of bridge rail IFO 6097 S. Elms Road south of W. Hill Road 0.16 mile south of W. Hill Road						42-56-26 83-48-38
16	East side of road in center of driveway to 6409 Seymour Road 0.26 miles north of Ried Road						42-55-47 83-51-13

WTRX-AM			NIGHTTIME FIELD INTENSITY MEASUREMENTS			RADIAL = 286 DEGREES	
FLINT, MICHIGAN							
1330 KHZ			DATE: 1/5/2010		DATE: 3/4/2010		
1KW DA-N ARRAY			BY: <u>Russell C. Harbaugh, Jr.</u>		BY: <u>Russell C. Harbaugh, Jr.</u>		
			26 Deg & light snow				
POINT NO.	DISTANCE			Pre-Construction		Post-Construction	LOG RATIO
	(MILES)	(KM)	Time	DA-N (mV/m)	Time	DA-N (mV/m)	(DB)
9	2.00	3.22	1215	14.0	1419	17.5	0.0969
10 (MP)	2.58	4.15	1219	11.0	1423	13.0	0.0726
11	3.30	5.31	1216	10.0	1430	9.5	-0.0223
12	4.02	6.47	1226	8.0	1438	8.2	0.0107
13	4.60	7.40	1238	5.0	1445	5.2	0.0170
14	5.15	8.29	1248	5.5	1451	5.0	-0.0414
15	7.02	11.30	1259	5.0	1503	4.8	-0.0177
16	8.58	13.81	1312	3.2	1510	3.0	-0.0280
	(MP) Maximum = 25.5 mV/m			Average of Log Ratios:			0.0110
				Antilog of Average Log Ratio:			1.0256
				CHANGE =			2.56%
POINT NO.	DESCRIPTION OF MEASUREMENT POINT						COORDINATES (NAD 27)
9	Camden Street 1/2 way between Hemphill Street and Markam Street						42-58-55 83-41-16
10 (MP)	See Monitor Point description						42-59-03 83-41-56
11	West side of VanSlyke Road next to stop light at entrance to GM Plant at sewer manhole						42-59-14 83-42-48
12	250 feet south of the intersection of Parkside Road and Briarhill Road						42-59-22 83-43-34
13	Southeast corner of school parking lot at end of Nedra Street						42-59-30 83-44-14
14	ASF 2322 Utley Road						42-59-38 83-44-52
15	SW corner of S. Dye Road and Reuben Street in front of Westchester Township Hall at sewer manhole						43-00-11 83-46-59
16	Elms Road 0.5 mile north of Corunna Road at Mailbox 1284						43-00-27 83-48-46