

**NEW 201C3
Vanceboro, NC**

This technical report is provided in support of an application for a NEW 201C3 facility at Vanceboro, NC.

Proposed 60 dBu service:

60 dBu Population = 177,142 (2010)

60 dBu Area = 3,888.9 sq. km. - water areas = 3,810.5 sq. km

1st NCE service = 7/ 1.3 sq. Km.

2nd NCE service = 51,227/ 1,188.4 sq km (less water area)

1st and 2nd NCE service = 51,234/ 1,189.7 sq. km.

See exhibit E-1. NCE service areas calculated using V-Soft Probe 4, FCC 30 meter terrain and 0.05 km calculation cells. Population determined using 2010 U.S. Census block data and area calculated by numerical integration using 360 radials.

New 201C3 Allocation:

An overlap study in exhibit E-2 shows the NEW 201C3 facility will not produce any interference overlap with other facilities at coordinates:

35-29-15 N 077-02-41.0 NAD83.

An interference plot and FMOver tabulation from WKNC-FM are included in exhibits E-3 and E-4. A PSI FMR six bay full wavelength-spaced, non-directional antenna will be mounted on the existing 151.0 meter tower, ASR #1007798, at a COR AGL of 129.5 meters, 139.5 meters AMSL, 131.5 meters HAAT. (exhibit E-5) and will operate at 9.0 kW ERP.

Anderson Associates

Broadcast Engineering Consultants

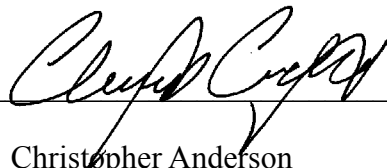
A 60 dBu contour is included in Exhibit E-6 showing that the proposed 60 dBu encompasses 100% of the Vanceboro, NC area and population, in compliance with §73.515.

RF Exposure Calculation:

The RF contribution of the New 201C3 facility was calculated using the FMModel program (exhibit E-7). The resulting value is $2.53 \mu\text{W}/\text{cm}^2$ at a distance of 40.4 meters from the base of the tower, which is below 5% of the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure, allowing exclusion from consideration.

Conclusion:

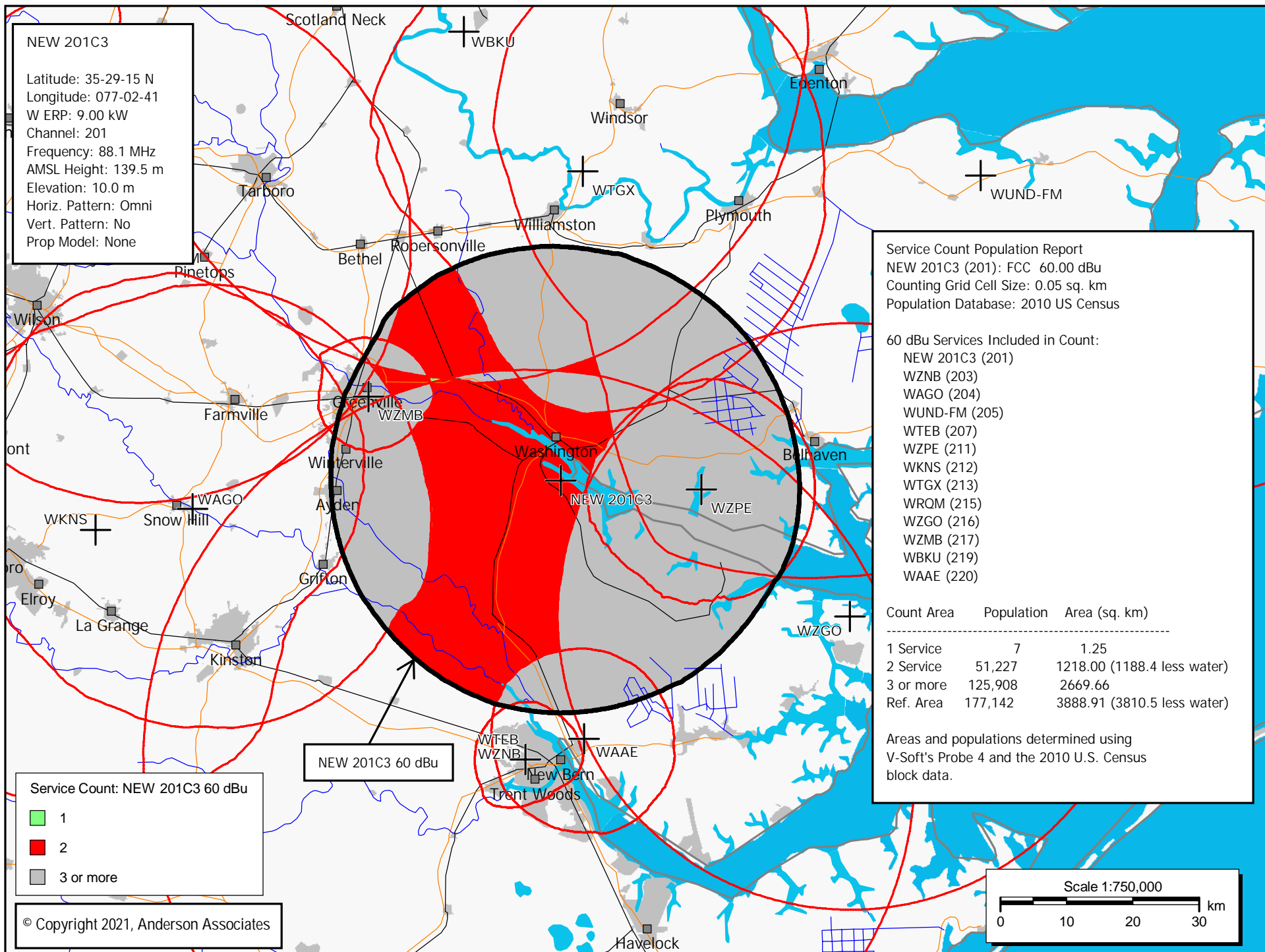
It is submitted the application for a NEW 201C3 facility is in full compliance with Commission rules and policies.



Christopher Anderson
October 25, 2021

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E-1 Vanceboro NCE Services



E-1 New 201C3 Vanceboro, NC Services List

Call Sign	Lic	Chan.	Svc	Cls	City	ST	DA	Power
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NEW 201C3	AP	201	M	C3	Vanceboro	NC	No	9.0
WZNB	LIC	203	M	A	New Bern	NC	Yes	0.3
WAGO	LIC	204	M	C3	Snow Hill	NC	No	17.0
WUND-FM	LIC	205	M	C0	Manteo	NC	Yes	50.0
WTEB	LIC	207	M	C1	New Bern	NC	No	100.0
WZPE	LIC	211	M	A	Bath	NC	No	4.5
WKNS	LIC	212	M	C2	Kinston	NC	Yes	35.0
WTGX	LIC	213	M	C3	Williamston	NC	Yes	20.0
WRQM	LIC	215	M	C2	Rocky Mount	NC	No	7.5
WZGO	LIC	216	M	C2	Aurora	NC	No	40.0
WZMB	LIC	217	M	A	Greenville	NC	No	0.28
WBKU	LIC	219	M	C1	Ahoskie	NC	Yes	61.5
WAAE	LIC	220	M	A	New Bern	NC	No	1.35

E-2 New 201C3 Overlap Study

REFERENCE		CH# 201C3 - 88.1 MHz, Pwr= 9 kW, HAAT= 131.5 M, COR= 139.5 M								DISPLAY DATES	
35 29 15.00 N.		Average Protected F(50-50)= 35.2 km								DATA 10-25-21	
77 02 41.00 W.		Omni-directional								SEARCH 10-25-21	
CH CITY	CALL	TYPE STATE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
201C3 Raleigh	WKNC-FM	LIC DCN NC		283.3 102.3	150.62 BLED20160719ABF	35 47 15.50 78 40 13.00	25.000 80	114.1 184	39.5 North Carolina State Unive	1.8	13.5
202C2 Elizabeth City	WVRL	LIC DCN NC		36.3 216.7	113.92 BLED20030206ACQ	36 18 40.60 76 17 32.80	50.000 136	74.0 136	48.9 Liberty University, Inc.	4.9	11.9
203A New Bern	WZNB	LIC DCN NC		187.1 7.1	42.40 BLED20030103ACG	35 06 32.60 77 06 08.80	0.300 37	1.2 43	8.7 Craven Community College	6.2	30.3
201C1 Lockwoods Folly Tow	WGHW	LIC DVN NC		209.0 28.4	176.14 BLED20150529ADI	34 05 52.30 77 58 17.20	52.000 110	131.8 114	45.9 Peace Baptist Church Of Wi	9.6	32.6
201A Emporia	WHRL	LIC _CN VA		340.9 160.6	140.94 BLED20111214AAX	36 41 04.50 77 33 39.90	4.200 119	86.2 165	29.4 Hampton Roads Educational	19.0	12.7
204C3 Snow Hill	WAGO	LIC _CN NC		265.5 85.2	55.46 BLED19980702KB	35 26 49.60 77 39 18.90	17.000 89	3.6 112	35.6 Pathway Christian Academy,	17.2	16.4
202A Beaufort	WXBE	LIC _CN NC		160.8 341.0	89.83 BLED20050214ABC	34 43 26.60 76 43 16.80	1.000 55	19.3 55	13.0 American Family Associatio	35.6	23.8
255C3 Bethel	WLXB«	LIC _CN NC		318.1 137.9	45.47 BMLED20150303AAM	35 47 29.60 77 22 52.90	11.200 149	107.5 163	42.4 Educational Media Foundati	13.5R	32.0M
255C3 Bethel	AL7051«	RSV-A ____ NC		319.8 139.6	46.60 RM10857	35 48 25.58 77 22 42.89	25.000 100	107.5 117	42.4 13.5R	13.5R	33.1M
203A Swan Quarter	WHYC	LIC _CN NC		93.7 274.2	74.71 BLED19980527KD	35 26 27.60 76 13 17.70	2.800 80	2.1 80	21.3 Hyde County Board Of Educa	36.7	49.9

Terrain database is FCC 30 meter , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference zone= - Zone 2, Co to 3rd adjacent.
 All separation margins (if shown) include rounding.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 « = Station meets FCC minimum distance spacing for its class.
 < = Contour Overlap

E-3 New 201C3 Interference Plot From WKNC-FM 201C3

FMCommander Single Allocation Study - 10-25-2021 - FCC 30 meter
NEW!'s Overlaps (In= 1.81 km, Out= 13.55 km)

NEW! CH 201 C3

Lat= 35 29 15.00, Lng= 77 02 41.00

9.0 kW 131.5 m HAAT, 139.5 m COR

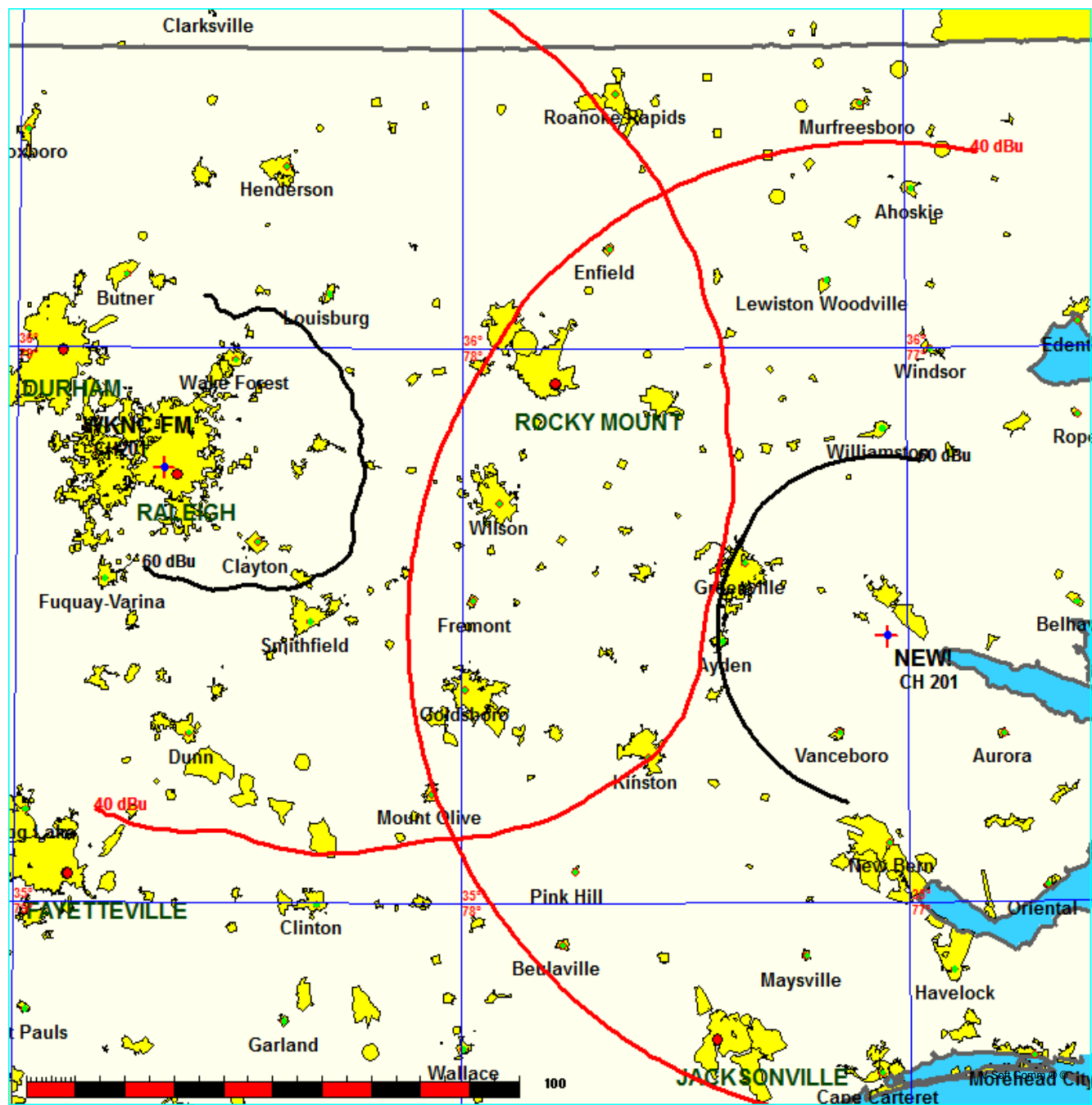
Prot.= 60 dBu, Intef.= 40 dBu

WKNC-FM CH 201 C3 DA BLED20160719ABF

Lat= 35 47 15.50, Lng= 78 40 13.00

25.0 kW 80 m HAAT, 184 m COR

Prot.= 60 dBu, Intef.= 40 dBu



E-4 New 201C3 FMOver Tabulation From WKNC-FM 201C3

NEW 201C3

WKNC-FM BLED20160719ABF

Channel = 201C3
Max ERP = 9 kW
RCAMSL = 139.5 m
N. Lat. 35 29 15.00
W. Lng. 77 02 41.00
Protected
60 dBu

Channel = 201C3
Max ERP = 25 kW
RCAMSL = 184 m
N. Lat. 35 47 15.50
W. Lng. 78 40 13.00
Interfering
40 dBu

Terrain Data: FCC 30 meter

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
223.0	009.0000	0125.8	034.5	115.0	025.0000	0117.5	136.8	36.29	
224.0	009.0000	0125.8	034.5	114.9	025.0000	0117.6	136.3	36.40	
225.0	009.0000	0125.5	034.5	114.8	025.0000	0117.5	135.7	36.51	
226.0	009.0000	0125.7	034.5	114.7	025.0000	0117.4	135.1	36.62	
227.0	009.0000	0125.6	034.5	114.6	025.0000	0117.3	134.6	36.73	
228.0	009.0000	0125.5	034.5	114.5	025.0000	0117.1	134.0	36.83	
229.0	009.0000	0125.5	034.5	114.4	025.0000	0116.9	133.5	36.94	
230.0	009.0000	0125.7	034.5	114.3	025.0000	0116.7	132.9	37.04	
231.0	009.0000	0125.5	034.5	114.2	025.0000	0116.3	132.4	37.13	
232.0	009.0000	0125.3	034.5	114.1	025.0000	0116.1	131.8	37.23	
233.0	009.0000	0125.4	034.5	114.0	025.0000	0116.2	131.3	37.34	
234.0	009.0000	0125.4	034.5	113.9	025.0000	0116.1	130.8	37.43	
235.0	009.0000	0125.6	034.5	113.7	025.0000	0115.9	130.2	37.53	
236.0	009.0000	0125.6	034.5	113.6	025.0000	0115.7	129.7	37.63	
237.0	009.0000	0125.6	034.5	113.5	025.0000	0115.6	129.2	37.72	
238.0	009.0000	0125.9	034.5	113.3	025.0000	0115.5	128.7	37.82	
239.0	009.0000	0126.6	034.6	113.2	025.0000	0115.5	128.1	37.92	
240.0	009.0000	0126.8	034.6	113.0	025.0000	0115.4	127.6	38.01	
241.0	009.0000	0126.7	034.6	112.9	025.0000	0115.4	127.1	38.09	
242.0	009.0000	0126.6	034.6	112.7	025.0000	0115.4	126.7	38.18	
243.0	009.0000	0126.4	034.6	112.5	025.0000	0115.3	126.2	38.26	
244.0	009.0000	0126.2	034.6	112.3	025.0000	0115.2	125.8	38.34	
245.0	009.0000	0126.2	034.6	112.2	025.0000	0115.1	125.3	38.42	
246.0	009.0000	0126.4	034.6	112.0	025.0000	0115.0	124.9	38.50	
247.0	009.0000	0126.3	034.6	111.8	025.0000	0115.0	124.4	38.57	
248.0	009.0000	0126.4	034.6	111.6	025.0000	0114.8	124.0	38.64	
249.0	009.0000	0126.5	034.6	111.4	025.0000	0114.6	123.6	38.71	
250.0	009.0000	0126.5	034.6	111.2	025.0000	0114.6	123.2	38.78	
251.0	009.0000	0126.6	034.6	111.0	025.0000	0114.4	122.7	38.85	
252.0	009.0000	0126.5	034.6	110.8	025.0000	0114.3	122.4	38.91	
253.0	009.0000	0126.4	034.6	110.5	025.0000	0113.9	122.0	38.97	
254.0	009.0000	0126.3	034.6	110.3	025.0000	0113.6	121.6	39.02	
255.0	009.0000	0126.3	034.6	110.1	025.0000	0113.5	121.3	39.08	
256.0	009.0000	0126.4	034.6	109.9	025.0000	0112.8	120.9	39.12	
257.0	009.0000	0126.4	034.6	109.6	025.0000	0112.3	120.6	39.17	
258.0	009.0000	0126.4	034.6	109.4	025.0000	0111.6	120.2	39.20	

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
259.0	009.0000	0126.5	034.6	109.1	025.0000	0110.7	119.9	39.23
260.0	009.0000	0126.7	034.6	108.9	025.0000	0109.6	119.6	39.25
261.0	009.0000	0126.6	034.6	108.6	025.0000	0109.0	119.3	39.28
262.0	009.0000	0126.6	034.6	108.4	025.0000	0108.4	119.0	39.32
263.0	009.0000	0126.6	034.6	108.1	025.0000	0107.4	118.8	39.33
264.0	009.0000	0126.5	034.6	107.9	025.0000	0106.8	118.5	39.36
265.0	009.0000	0126.4	034.6	107.6	025.0000	0106.3	118.3	39.38
266.0	009.0000	0126.4	034.6	107.3	025.0000	0106.3	118.0	39.42
267.0	009.0000	0126.3	034.6	107.0	025.0000	0106.1	117.8	39.45
268.0	009.0000	0126.4	034.6	106.8	025.0000	0105.7	117.6	39.48
269.0	009.0000	0126.3	034.6	106.5	025.0000	0104.5	117.4	39.47
270.0	009.0000	0126.4	034.6	106.2	025.0000	0103.8	117.2	39.49
271.0	009.0000	0126.5	034.6	105.9	025.0000	0103.5	117.0	39.51
272.0	009.0000	0126.6	034.6	105.6	025.0000	0103.0	116.9	39.52
273.0	009.0000	0126.8	034.6	105.4	025.0000	0102.8	116.7	39.55
274.0	009.0000	0127.2	034.7	105.1	025.0000	0102.7	116.5	39.57
275.0	009.0000	0127.3	034.7	104.8	025.0000	0102.1	116.4	39.58
276.0	009.0000	0127.6	034.7	104.5	025.0000	0101.3	116.2	39.58
277.0	009.0000	0127.9	034.8	104.2	025.0000	0101.2	116.1	39.60
278.0	009.0000	0128.1	034.8	103.9	025.0000	0101.4	116.0	39.62
279.0	009.0000	0127.9	034.8	103.6	025.0000	0101.5	116.0	39.63
280.0	009.0000	0127.7	034.8	103.3	025.0000	0101.8	115.9	39.65
281.0	009.0000	0127.7	034.8	103.0	025.0000	0101.8	115.9	39.65
282.0	009.0000	0127.4	034.7	102.7	025.0000	0102.1	115.9	39.66
283.0	009.0000	0127.5	034.7	102.4	025.0000	0102.5	115.9	39.68
284.0	009.0000	0127.7	034.8	102.1	025.0000	0102.7	115.9	39.69
285.0	009.0000	0128.0	034.8	101.8	025.0000	0103.3	115.9	39.71
286.0	009.0000	0128.3	034.8	101.5	025.0000	0103.6	115.8	39.72
287.0	009.0000	0128.2	034.8	101.2	025.0000	0103.7	115.9	39.71
288.0	009.0000	0128.0	034.8	100.9	025.0000	0103.7	116.0	39.70
289.0	009.0000	0128.3	034.8	100.6	025.0000	0103.7	116.0	39.69
290.0	009.0000	0128.8	034.9	100.3	025.0000	0103.5	116.0	39.68
291.0	009.0000	0129.8	035.0	100.0	025.0000	0103.4	116.0	39.68
292.0	009.0000	0130.0	035.0	099.7	025.0000	0103.7	116.1	39.67
293.0	009.0000	0129.4	034.9	099.4	025.0000	0103.8	116.3	39.64
294.0	009.0000	0129.2	034.9	099.1	025.0000	0104.2	116.5	39.63
295.0	009.0000	0128.9	034.9	098.8	025.0000	0104.5	116.7	39.60
296.0	009.0000	0128.8	034.9	098.6	025.0000	0104.6	116.8	39.58
297.0	009.0000	0128.9	034.9	098.3	025.0000	0105.0	117.0	39.56
298.0	009.0000	0129.2	034.9	098.0	025.0000	0105.3	117.2	39.54
299.0	009.0000	0129.1	034.9	097.7	025.0000	0106.2	117.4	39.53
300.0	009.0000	0129.1	034.9	097.4	025.0000	0106.6	117.6	39.51
301.0	009.0000	0129.2	034.9	097.1	025.0000	0106.8	117.8	39.47
302.0	009.0000	0129.5	035.0	096.9	025.0000	0107.2	118.1	39.45
303.0	009.0000	0129.5	035.0	096.6	025.0000	0107.6	118.3	39.42
304.0	009.0000	0129.9	035.0	096.3	025.0000	0107.0	118.5	39.36
305.0	009.0000	0130.6	035.1	096.0	025.0000	0106.5	118.7	39.31
306.0	009.0000	0131.1	035.1	095.8	025.0000	0106.6	119.0	39.27
307.0	009.0000	0131.5	035.2	095.5	025.0000	0106.8	119.2	39.23
308.0	009.0000	0131.8	035.2	095.2	025.0000	0106.8	119.5	39.18
309.0	009.0000	0132.7	035.3	095.0	025.0000	0107.0	119.8	39.14

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
310.0	009.0000	0134.0	035.5	094.7	025.0000	0107.6	120.0	39.12
311.0	009.0000	0135.6	035.7	094.4	025.0000	0108.1	120.2	39.10
312.0	009.0000	0137.5	035.9	094.1	025.0000	0108.3	120.4	39.08
313.0	009.0000	0138.2	036.0	093.8	025.0000	0108.6	120.7	39.03
314.0	009.0000	0138.5	036.0	093.6	025.0000	0109.7	121.1	39.00
315.0	009.0000	0138.8	036.1	093.3	025.0000	0110.5	121.4	38.96
316.0	009.0000	0139.0	036.1	093.1	025.0000	0110.9	121.8	38.90
317.0	009.0000	0138.8	036.1	092.9	025.0000	0110.9	122.3	38.83
318.0	009.0000	0138.2	036.0	092.7	025.0000	0111.1	122.8	38.75
319.0	009.0000	0138.0	036.0	092.5	025.0000	0111.3	123.2	38.67
320.0	009.0000	0137.9	036.0	092.3	025.0000	0111.0	123.7	38.58
321.0	009.0000	0138.0	036.0	092.1	025.0000	0110.7	124.1	38.50
322.0	009.0000	0137.9	036.0	091.9	025.0000	0110.7	124.6	38.41
323.0	009.0000	0137.6	035.9	091.8	025.0000	0110.5	125.1	38.32
324.0	009.0000	0137.9	035.9	091.6	025.0000	0110.4	125.6	38.23
325.0	009.0000	0137.7	035.9	091.4	025.0000	0110.3	126.1	38.13
326.0	009.0000	0138.2	036.0	091.2	025.0000	0110.2	126.6	38.05
327.0	009.0000	0138.2	036.0	091.0	025.0000	0110.4	127.1	37.96
328.0	009.0000	0138.3	036.0	090.9	025.0000	0110.5	127.6	37.87
329.0	009.0000	0138.4	036.0	090.7	025.0000	0110.5	128.1	37.78
330.0	009.0000	0138.2	036.0	090.6	025.0000	0110.5	128.6	37.68
331.0	009.0000	0137.7	035.9	090.4	025.0000	0110.5	129.2	37.57
332.0	009.0000	0137.1	035.9	090.3	025.0000	0110.6	129.8	37.46
333.0	009.0000	0137.0	035.8	090.2	025.0000	0110.6	130.4	37.35
334.0	009.0000	0137.0	035.8	090.1	025.0000	0110.4	130.9	37.24
335.0	009.0000	0137.1	035.9	090.0	025.0000	0110.2	131.5	37.13
336.0	009.0000	0136.8	035.8	089.9	025.0000	0109.9	132.0	37.01
337.0	009.0000	0136.5	035.8	089.8	025.0000	0109.5	132.6	36.88
338.0	009.0000	0136.2	035.8	089.7	025.0000	0109.2	133.2	36.76
339.0	009.0000	0136.1	035.7	089.6	025.0000	0109.0	133.8	36.64
340.0	009.0000	0136.0	035.7	089.5	025.0000	0108.8	134.4	36.52
341.0	009.0000	0135.8	035.7	089.4	025.0000	0108.6	135.0	36.40
342.0	009.0000	0135.6	035.7	089.3	025.0000	0108.5	135.6	36.28

E-5 New 201C3 HAAT Calculation

N. Lat. = 352915.0 W. Lng. = 0770241.0

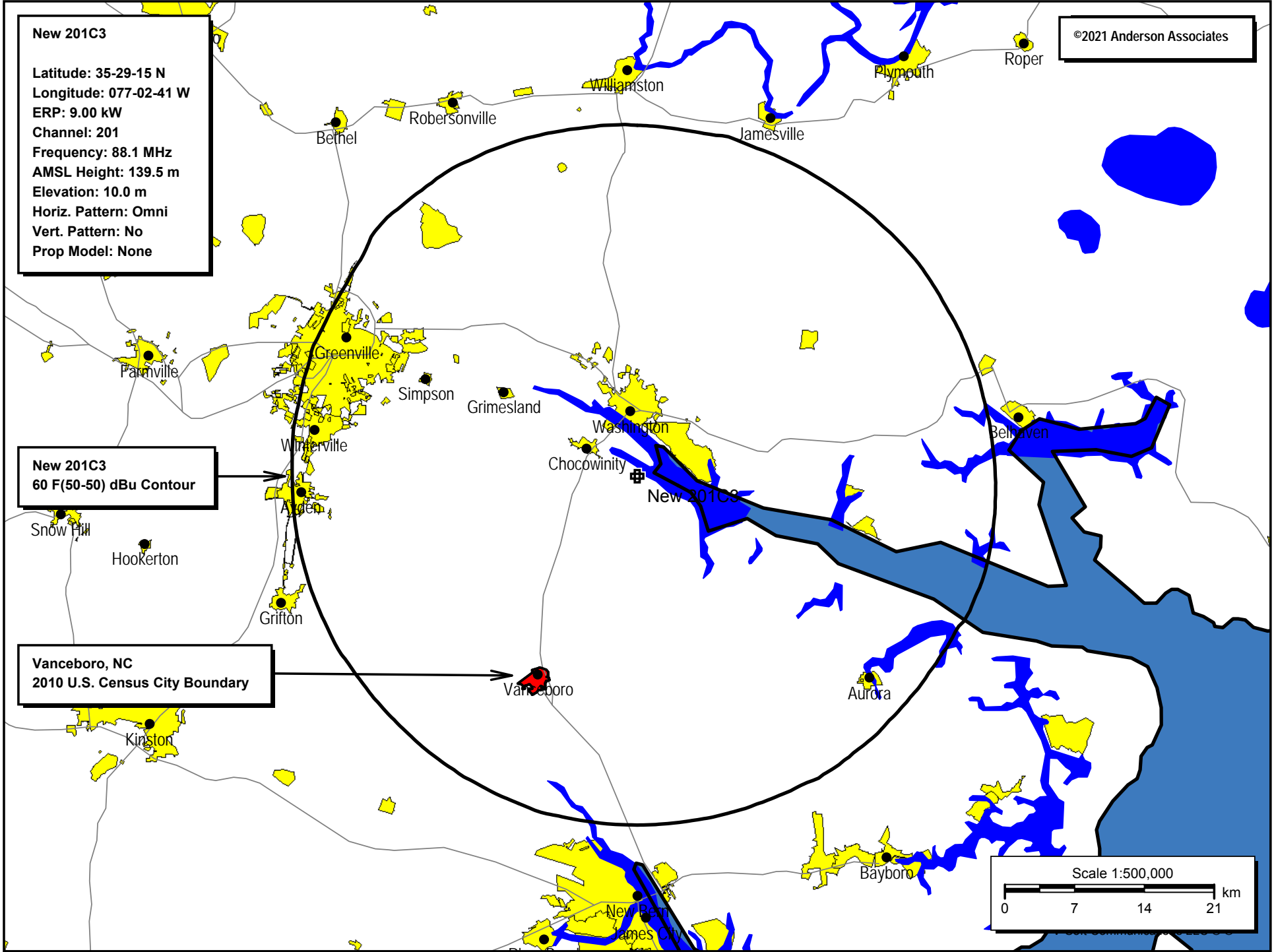
HAAT and Distance to Contour,

FCC, FM 2-10 Miles, 51 points Method - FCC 30 Meter Terrain

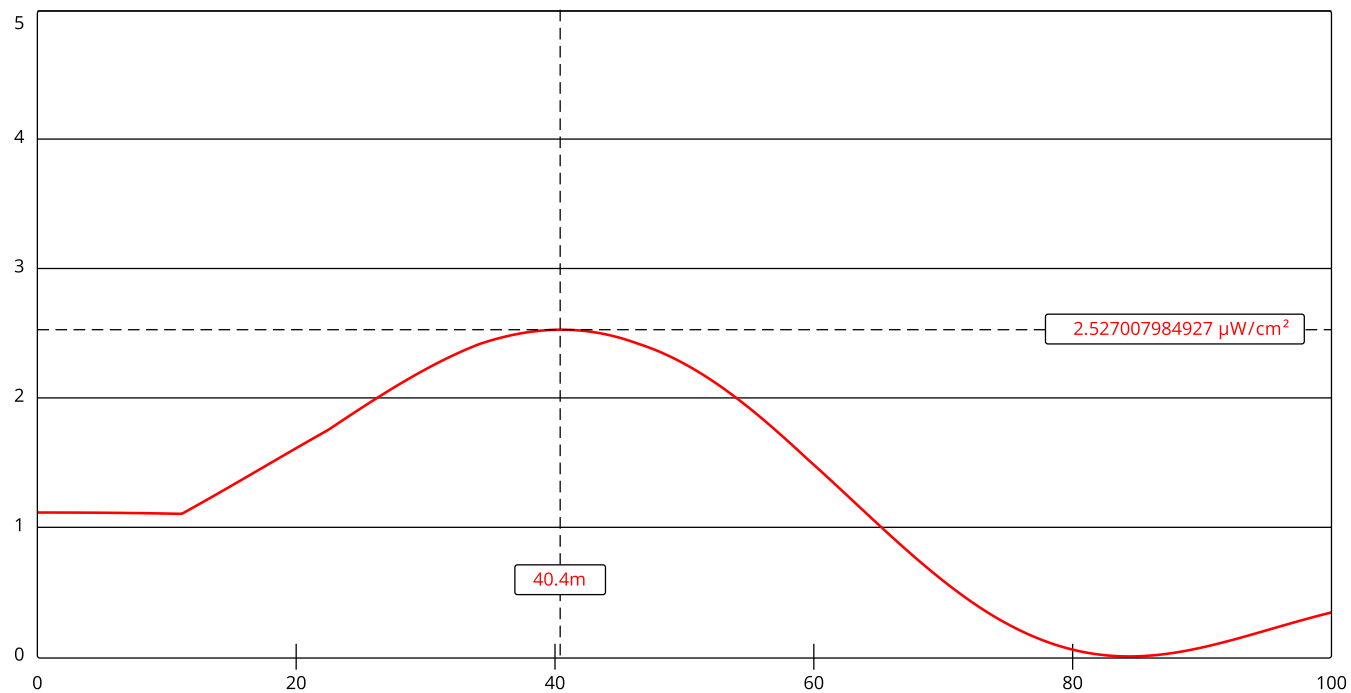
Azi.	AV EL	HAAT	ERP kW	60-F(50-50)
000	8.0	131.5	9.0000	35.19
045	8.4	131.1	9.0000	35.15
090	2.1	137.4	9.0000	35.89
135	7.9	131.6	9.0000	35.21
180	10.0	129.5	9.0000	34.97
225	14.0	125.5	9.0000	34.50
270	13.1	126.4	9.0000	34.60
315	0.7	138.8	9.0000	36.06

Ave El= 8.03 M HAAT= 131.47 M AMSL= 139.5 M

E-6 New 201C3 60 dBu Contour Plot



E-7 New 201C3 RF Calculation



Channel Selection	Channel 201 (88.1 MHz) ▼		
Antenna Type +	EPA Type 3: Opposed U Dipole ▼		
Height (m)	<input type="text" value="129.5"/>	Distance (m)	<input type="text" value="100"/>
ERP-H (W)	<input type="text" value="9000"/>	ERP-V (W)	<input type="text" value="9000"/>
Num of Elements	<input type="text" value="6"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>		

ASR Registration 1007798

Registration Detail

Reg Number	1007798	Status	Constructed
File Number	A1136606	Constructed	01/01/1989
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	35-29-15.0 N 077-02-41.0 W	Address	ON SR 1123 5.15 KM E
City, State	CHOCOWINITY , NC		
Zip	27817	County	BEAUFORT
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
10.0	151.0
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
161.0	151.0

Painting and Lighting Specifications

FCC Paragraphs A2, H

FAA Notification

FAA Study	FAA Issue Date
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Owner & Contact Information

FRN	0007636145	Owner Entity Type	Limited Liability Company
Assignor FRN	0008003154	Assignor ID	L00743093

Owner

Media East LLC	P: (704)878-9004
Attention To: Ronald W. Benfield, Member	F:
3208 Banberry Drive	E: rwbpdh@yahoo.com
Statesville , NC 28625	

Contact

Attention To: Ronald W. Benfield, Member	P: (704)878-9004
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Last Action Status

Status	Constructed	Received	05/22/2019
Purpose	Change Owner	Entered	05/22/2019
Mode	Interactive		