

Channel Study

REFERENCE		CH# 225D - 92.9 MHz, Pwr= 0.027 kW, HAAT= 79.3 M, COR= 265.4 M								DISPLAY DATES	
41 33 30.0 N.		Average Protected F(50-50)= 6.6 km								DATA 01-03-13	
83 33 33.6 W.		Omni-directional								SEARCH 01-04-13	
CH CITY	CALL	TYPE STATE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
223B Toledo	WVKS	LIC	CN OH	224.2 44.2	4.09 BMLH19961008KA	41 31 55.0 83 35 37.0	50.000 146	6.1 340	65.9 Citicasters	-8.3*<	-62.6*<
228B1 Bowling Green	WRQN	LIC	NCX OH	216.7 36.6	13.93 BLH20061002BGR	41 27 28.0 83 39 33.0	7.000 121	3.2 315	38.1 Cumulus Licensing Llc	4.5	-24.7*<
225D Middleton Township	W225AM	LIC	C OH	205.4 25.4	14.83 BLFT20070522ADL	41 26 16.0 83 38 09.0	0.055 59	24.2 257	7.2 Educational Media Foundati	-15.6*	-13.3
225D Adrian	W211BQ	APP	C MI	316.3 136.0	48.84 BMPFT20080703AAQ	41 52 30.0 83 58 00.0	0.250 49	35.2 276	10.4 Great Lakes Broadcast Acad	6.9	16.0
226B Detroit	WDRQ	LIC	DCN MI	16.1 196.4	105.64 BLH19860613KB	42 28 16.0 83 12 03.0	26.500 204	78.7 412	66.3 Radio License Holding I, L	20.0	25.6
222B Detroit	WMXD	LIC	ZCN MI	26.1 206.5	95.92 BLH19970303KA	42 19 55.0 83 02 42.0	45.000 146	5.9 331	64.7 Amfm Radio Licenses, L.l.c	83.2	30.5
224B1 Leamington	CJSP<	OPE	DEN ON	58.4 239.1	96.83 20070228CAN	42 00 35.0 82 33 45.0	4.000 145	14.2 324	12.0	59.5R	37.3M
227D Tiffin	W227BJ	LIC	C OH	147.3 327.5	58.67 BLFT20051021AFI	41 06 49.0 83 10 51.0	0.055 41	0.5 275	6.6 Tiffin Broadcasting, Llc	51.8	51.7
226A Lima	WWSR	LIC	CN OH	210.8 30.4	102.66 BLH19920916KD	40 45 47.0 84 10 59.0	3.000 97	39.3 350	25.8 Maverick Media Of Lima Lic	57.1	67.9
224A Bucyrus	WQEL	LIC	CX OH	149.1 329.5	102.71 BLH20060303AAO	40 45 49.0 82 56 00.0	3.000 93	37.5 402	24.7 Franklin Communications, I	58.9	68.9
225A Grand Ledge	WLMI	LIC	CX MI	328.2 147.5	154.18 BLH20071119AEL	42 43 58.0 84 33 13.0	5.400 105	85.3 365	27.9 Midwest Communications, In	62.1	103.8
225B Eaton	WGTZ	LIC	CN OH	200.7 20.1	204.15 BLH19850204KW	39 50 10.0 84 24 16.0	40.000 168	134.4 463	64.3 Mlb-dayton Iv, Llc	63.5	110.2
228D Riverview	641526	APP	C MI	23.5 203.7	73.22 BNPFT20030317EBC	42 09 44.0 83 12 20.0	0.019 100	0.3 278	6.8 Educational Media Foundati	66.1	66.1

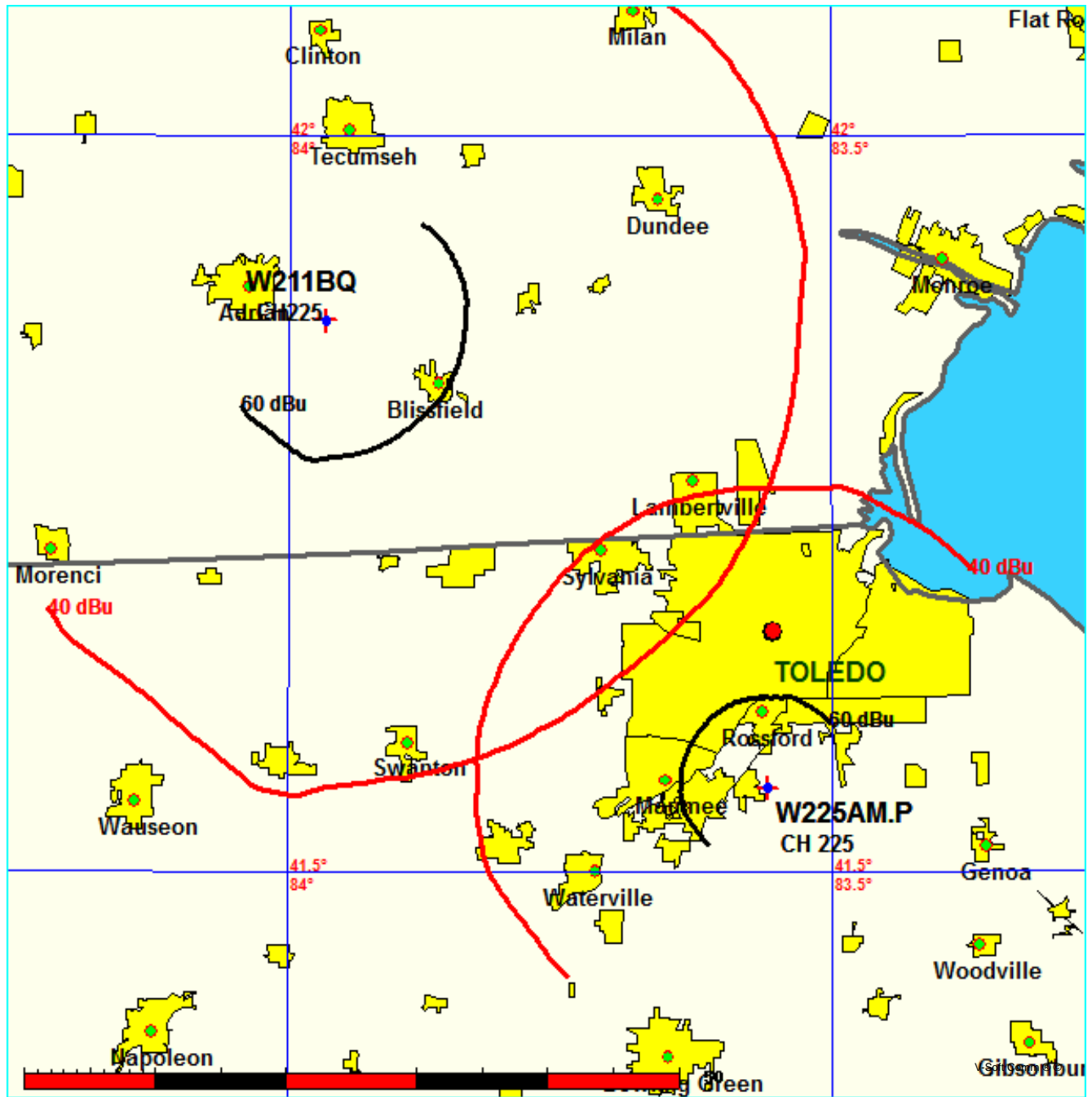
KM
Terrain database is NGDC 30 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in
Contour distances are on direct line to and from reference station. Reference Zone= East Zone, Co to 3rd
adjacent.
All separation margins (if shown) include rounding
Ant Column: (D= DA Standard, 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 protected contour.
< = Station meets FCC minimum distance spacing for its class.
< = Contour Overlap
Reference station has protected zone issue:

Educational Media Foundation

FMCommander Single Allocation Study - 01-07-2013 - NGDC 30 SEC
W225AM.P's Overlaps (In= 6.91 km, Out= 16.05 km)

W225AM.P CH 225 D
Lat= 41 33 30.0, Lng= 83 33 33.6
0.027 kW 79.3 M HAAT, 265.4 M COR
Prot.= 60 dBu, Intef.= 40 dBu

W211BQ CH 225 D BMPFT20080703AAQ
Lat= 41 52 30.0, Lng= 83 58 00.0
0.25 kW 48.5 M HAAT, 276 M COR
Prot.= 60 dBu, Intef.= 40 dBu



Educational Media Foundation

FMCommander Single Allocation Study - 01-07-2013 - NGDC 30 SEC
W225AM.P's Overlaps (In= 19.98 km, Out= 25.59 km)

W225AM.P CH 225 D

Lat= 41 33 30.0, Lng= 83 33 33.6

0.027 kW 79.3 M HAAT, 265.4 M COR

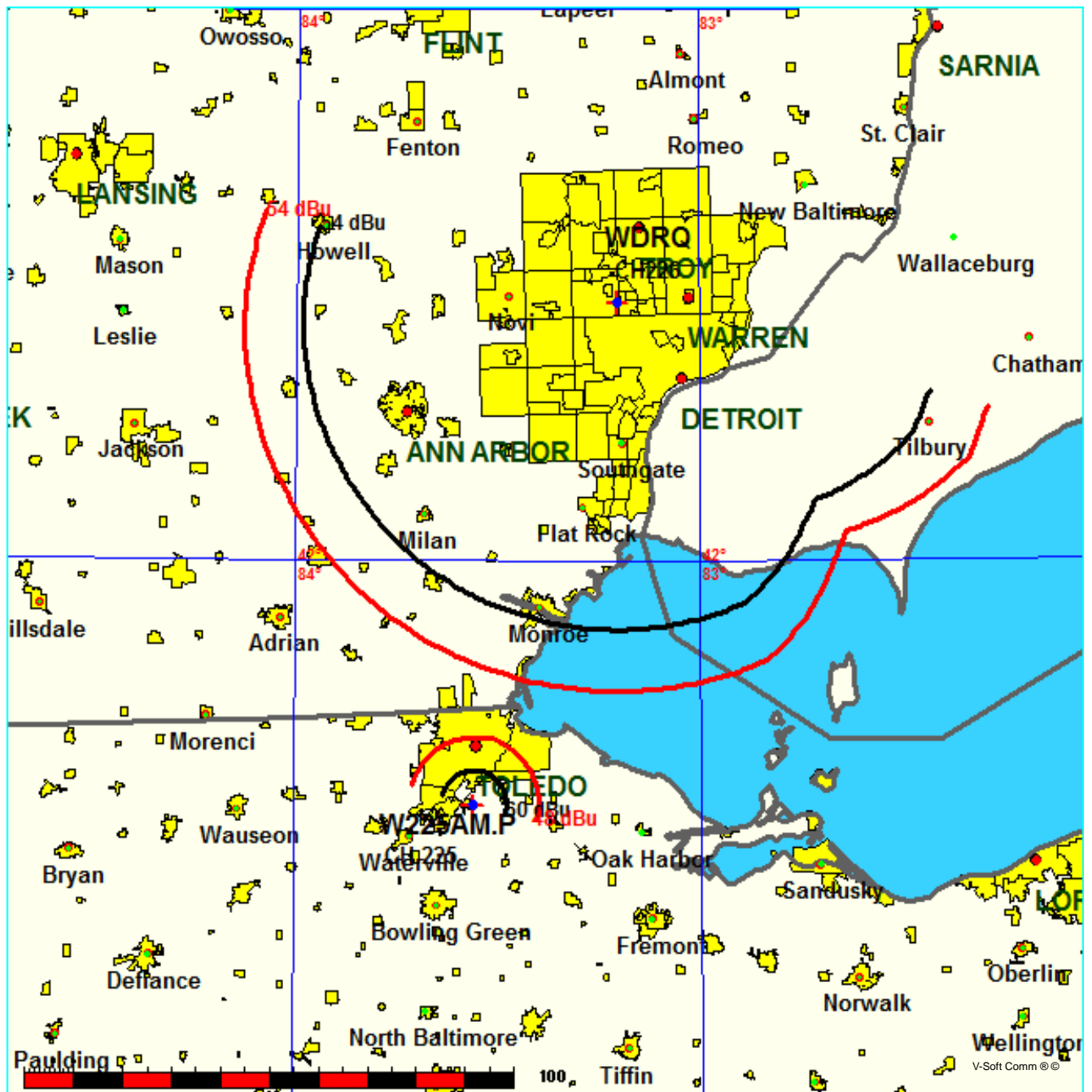
Prot.= 60 dBu, Intef.= 48 dBu

WDRQ CH 226 B DA BLH19860613KB

Lat= 42 28 16.0, Lng= 83 12 03.0

26.5 kW 204 M HAAT, 412 M COR

Prot.= 54 dBu, Intef.= 54 dBu



Compliance with C.F.R. 74.1204

The proposed FM Translator is also located within the protected 54dBu contour of second adjacent channel station WVKs, channel 223B, Toledo, OH. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W225AM.P:	27 watts
The proposed COR for W225AM.P:	67 meters
WVKs F(50/50) contour at proposed site:	106.1dBu
The F(50/10) contour of proposed W225AM.P:	146.1dBu

The predicted distance to the 146.1dbu interfering contour is 1.8 meters. Taking into account the vertical elevation pattern for the RFS CPF500 single bay antenna and the height above ground of 67M, it has been determined that the interfering contour of 146.1dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 66.055M above ground.

As can be seen in Exhibit 13–A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 66.055 meter aperture.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
W225AM
Middleton Township, OH

ERP (kw): 0.027
Height of Antenna above Ground (m): 67
Translator's IX Contour: 146.1
Antenna Type: RFS CPF-500

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.0270	1.8059	67.000
5	0.997	0.0268	1.7995	66.843
10	0.986	0.0262	1.7806	66.691
15	0.969	0.0253	1.7491	66.547
20	0.945	0.0241	1.7058	66.417
25	0.914	0.0226	1.6509	66.302
30	0.878	0.0208	1.5854	66.207
35	0.836	0.0189	1.5099	66.134
40	0.789	0.0168	1.4254	66.084
45	0.738	0.0147	1.3329	66.057
50	0.683	0.0126	1.2336	66.055
55	0.625	0.0105	1.1287	66.075
60	0.565	0.0086	1.0194	66.117
65	0.502	0.0068	0.9071	66.178
70	0.439	0.0052	0.7931	66.255
75	0.376	0.0038	0.6786	66.344
80	0.313	0.0026	0.5651	66.444
85	0.251	0.0017	0.4536	66.548
90	0.191	0.0010	0.3455	66.655

Compliance with C.F.R. 74.1204

The proposed FM Translator is also located within the protected 57dBu contour of third adjacent channel station WRQN, channel 228B1, Toledo, OH. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W225AM.P:	27 watts
The proposed COR for W225AM.P:	67 meters
WRQN F(50/50) contour at proposed site:	75.1dBu
The F(50/10) contour of proposed W225AM.P:	115.1dBu

The predicted distance to the 115.1dbu interfering contour is 64.2 meters. Taking into account the vertical elevation pattern for the RFS CPF500 single bay antenna and the height above ground of 67M, it has been determined that the interfering contour of 115.1dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 33.471M above ground.

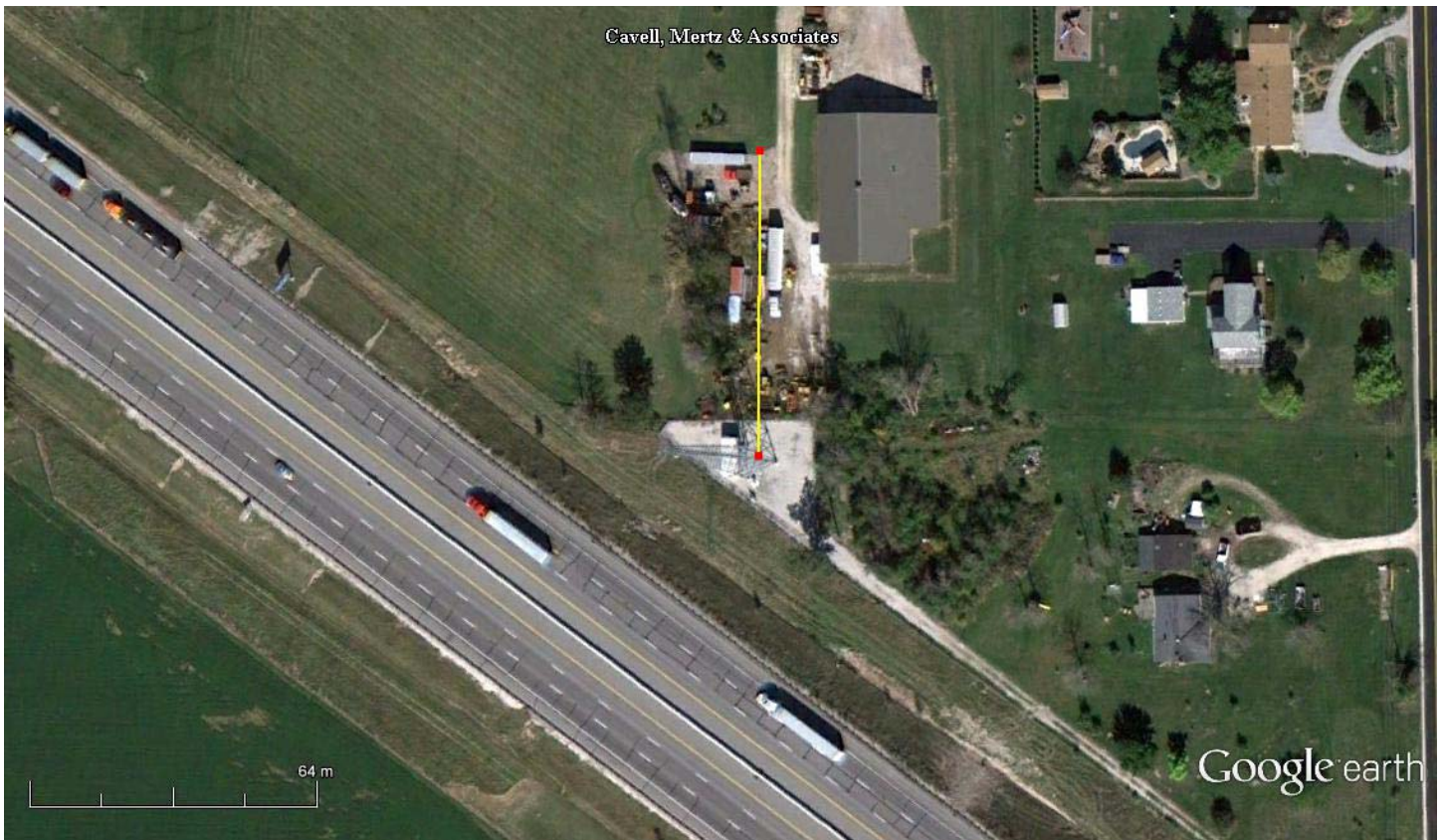
As can be seen in Exhibit 13–A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 33.471 meter aperture.

Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
W225AM
Middleton Township, OH

ERP (kw): 0.027
Height of Antenna above Ground (m): 67
Translator's IX Contour: 115.1
Antenna Type: RFS CPF-500

Depression Angle from Horizon	Antenna Relative Field	ERP (kw) from the Antenna RF	Dist. To IX Contour (m)	Height IX Contour Above Ground (m)
0	1.000	0.0270	64.0740	67.000
5	0.997	0.0268	63.8497	61.435
10	0.986	0.0262	63.1770	56.029
15	0.969	0.0253	62.0621	50.937
20	0.945	0.0241	60.5243	46.299
25	0.914	0.0226	58.5765	42.245
30	0.878	0.0208	56.2506	38.875
35	0.836	0.0189	53.5723	36.272
40	0.789	0.0168	50.5736	34.492
45	0.738	0.0147	47.2930	33.559
50	0.683	0.0126	43.7690	33.471
55	0.625	0.0105	40.0463	34.196
60	0.565	0.0086	36.1698	35.676
65	0.502	0.0068	32.1844	37.831
70	0.439	0.0052	28.1413	40.556
75	0.376	0.0038	24.0790	43.741
80	0.313	0.0026	20.0488	47.256
85	0.251	0.0017	16.0954	50.966
90	0.191	0.0010	12.2574	54.743



Google earth

feet
meters

100 500



NAD27

41 33' 30.0" N

83 33' 33.6" W

Marker: 67M at zero degrees true