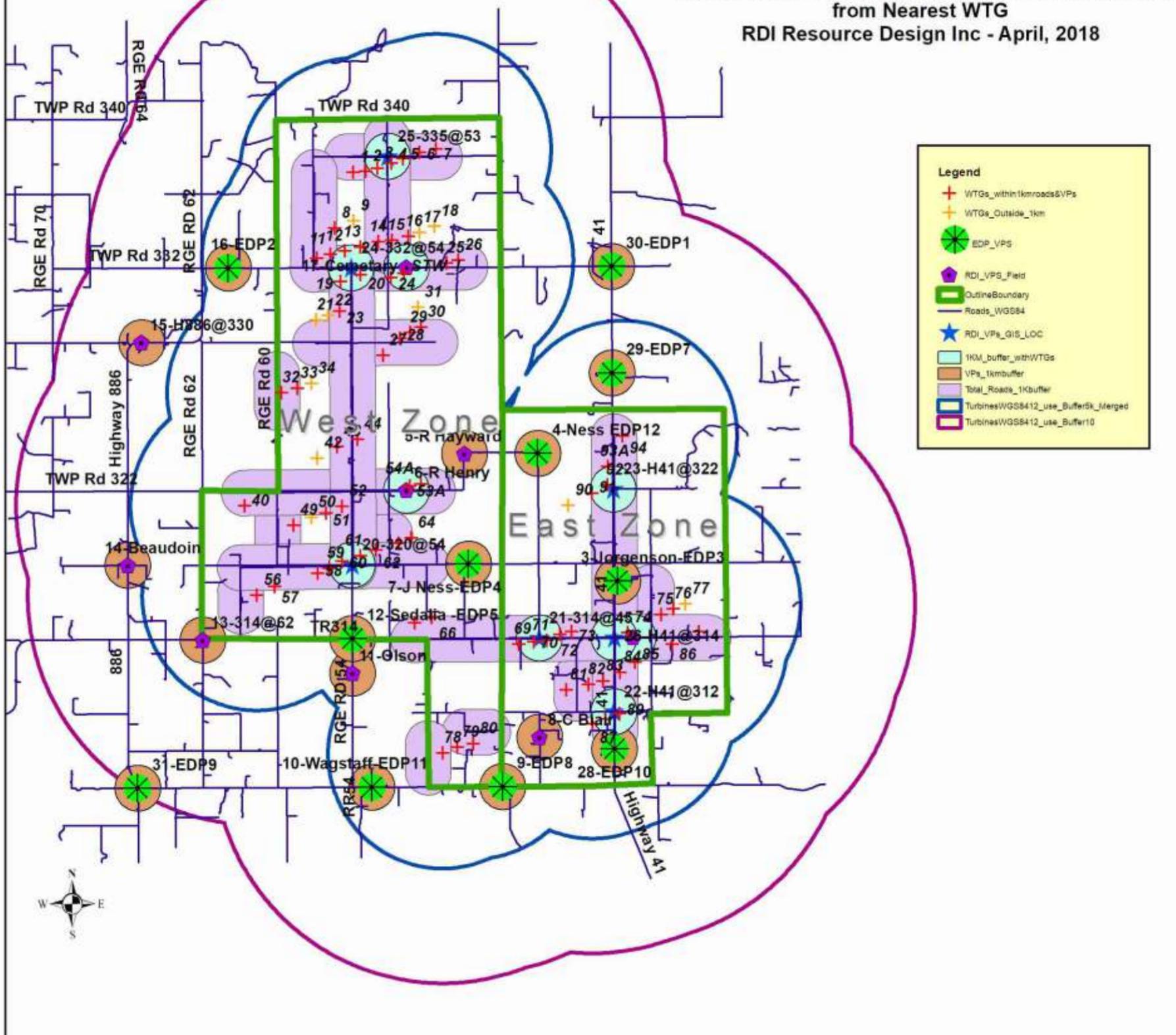


**EDP Sharp Hills Wind Farm Proposal
Showing WTG Locations within 1km Foreground
Distance Zone from Viewpoints and Road Corridors
and Showing Outer Rings of 5km and 10km Distance
from Nearest WTG
RDI Resource Design Inc - April, 2018**



**Visual Effects Assessment
EDP Renewables
Sharp Hills Wind Farm Proposal
RDI Resource Design Inc
April 2018 - Part B**

A field observation and photography exercise was conducted by Ken Fairhurst and Brydon Coby of RDI on November 14, 2017. The tour was guided by Sheldon and Kelly Kroker. The Krokers located 7 of the EDP viewpoints for RDI, and RDI located the remaining 4 EDP viewpoints on the map during the mapping exercise. The EDP viewpoints are termed Visual Representation Locations by EDP. All are shown as large green icons on the map. The Krokers also located an additional 9 viewpoints that they considered to be representative of the viewing opportunities towards the proposed wind turbine generators (WTG's). These have purple icons on the map. Upon analysis using ArcGIS 10.1, RDI added a further 7 viewpoints. These are depicted as blue stars on the map.

The map indicates 1km circular buffers around each viewpoint which depicts the Foreground Distance Zone - the zone considered to have the greatest visual vulnerability in many visual landscape guidelines. The buffer of the viewpoints with one or more WTG's within the buffer are shown as light blue on the map.

RDI also identified 1km Foreground Distance Zones along community roads containing one or more WTG's along the local travel routes. These are road buffers are identified in purple on the map. The viewpoints and road proximities to the WTG's are summarized in the table on Page 2 of this report, and are summarized and discussed in the overview report. The photography and simulations reports are provided separately as Part A and Part B. The viewpoints covered in each report are shown in the table on Page 2.

The photos taken were overlapping individual 35mm to 42 mm shots using a Nikon D5300 camera with a Nikon 18mm to 105mm lens, set primarily between 38mm and 42mm. The Nikon digital camera frame equates to a standard 35mm camera with a correction factor of 1.5 to become 52mm to 63mm with field of view of 38 to 42 degrees. The individual frames were stitched into full 360 degree panoramas, and then split along the principal roadway in each panorama to provide orientation with cardinal directions (i.e., North / South or East / West).

RDI utilized Visual Nature Studio 3-dimensional software to produce 40 degree single images stitched automatically by the VNS software into 360 degree simulations from each of the viewpoints. RDI then split the full panoramas into 180 degree half-panoramas along the same roads as the photography for ease of comparison and validation.

The simulations placed a 3-dimensional model of the Vestas V136 to scale at each EDP WTG point. The Vestas model was shown as having a vertical blade reaching 200m in height, correctly located for distance and terrain. The absence of vegetation cover information was overcome somewhat by the addition of 15m height tree patches to compare with the scale of the WTG's. Camera direction is provided across the bottom of each simulation. Measurement bars indicate 0 to 180 degrees, and also a 40 degree bar and framing box (standard 35mm camera frame width).

The wide panoramas tend to diminish the scale of the WTG's. Zooming in to a 40 degree width of view emulates normal viewing. Each single frame located on the panoramas was presented on the following full page in the images reports. Viewing distance from a single frame printed image should be 1.5 times the diagonal length of the image (e.g. 11"x8.5" print = 21 inch viewing distance).

RDI also prepared day and night photo-montages using windPRO 3.1 from Viewpoint 3 - EDP3 - Jorgenson's Bins. These are provided as inserts on Page 8 of Part A. The night view shows the aviation lights. The same software was also used to produce day and night animations with revolving rotors. The animations require a separate viewer and could not be included in this document.

Visual Effects Assessment - EDP Renewables' Sharp Hills Wind Farm Proposal

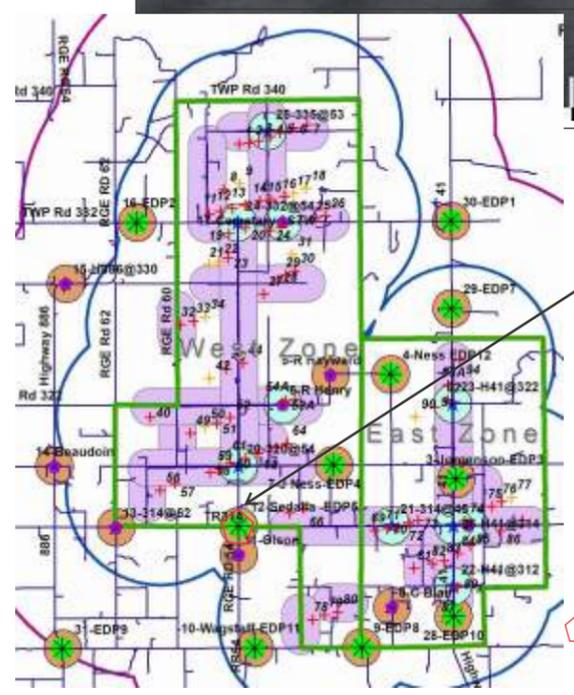
Report Page #	RDI Viewpoint Number	Viewpoint Name	Viewpoint Location	Viewpoint Photo Record	Distance to Closest WTG (m)	Closest WTG #	Foreground WTG's in 1.0km Buffer	Foreground WTG's within 1.5km Buffer	
Part A									
3 to 6	2	2-GPS829 TR315 East of HWY 41	GPS829-TR314-Eastof Hwy41	South / North split - Kelly Kroker Photos	315	74	1	3	
7 to 10	3	3-GPS830-Jorgensons's Bins-EDP3-Sim	3- Georgenson's Bins - South View	N-0831-0824 (11 images); S-0803-0813 (11 images)	2500	75	0	0	
11 to 14	4	4-GPS831-Ness EDP12	EDP12-TR323@RR45	W 0835-0842 (8 images); E-0825-0835-(11 images)	2660	90	0	0	
15 to 18	5	5-GPS832-Randy Hayward	TR323@RR51	5E-843-847; 5W-849-859 OK	2330	54A	0	0	
19 to 22	6	6-GPS833-Ralph Henry	TP322, 1227m East of RR53	6S-860-871, 6N-871-879 OK	230	53A	2	2	
23 to 26	7	7-GPS834-Jim Ness-EDP4	TR320 east of RR50	7N-images 881-891; 7S- images 892-899	2750	64	0	0	
27 to 30	8	8-GPS835-Cory Blair RGE RD 45	RR45	8W-900-912; 8E-images 911-921	2360	81, 87	0	0	
31 to 33	9	9-GPS836-TWP RD 310/RGE Rd50/EDP8	TR310@RR50; EDP8	9N-images 932-940; 9S-images 922-932	2270	80	0	0	
34 to 36	10	10-GPS837-Wagstaff-EDP11	TR310 @ 736m East of RR54; EDP11	10N - 947-954; 10S - 941-947	3440	78	0	0	
37 to 40	11	11-GPS838-Gene Olson	RR54 @ 2400m South of TR314	11W - 955-963; 11E 963-972	3580	78	0	0	
Part B									
3 to 6	12	12-GPS839-Sedalia Townsite-EDP5-Sim	TR 314 @ RR 54	12S-973-984 - 12 images; 12N-983-994-12 images	2750	65	0	0	
7 to 8	13	13-314@62	GPS 840-314@62	13N-0995-0006 (11 images); no south view photos	3075	56	0	0	
9 to 10	14	14-GPS841-Kent&Dawne	TWP RD320-4/RGE HWY 886	14E - 0007-0015 (9 images); no west view photos	5770	40, 56	0	0	
11 to 14	15	15-GPS845-HWY886/TWP RD330	Hwy 886 @ TR 330	N-0025-0035 (11 images); S-0016-0024 (9 images)	6470	32	0	0	
15 to 18	16	16-GPS844-EDP2- TWP Rd332Near 62-Sim	EDP2-TR332 east of RR62	N-0045-0053 (9 images); S-0036-0045 (10 images)	3890	10	0	0	
19 to 20	17	17-GPS846-Cemetery	TR332 East of RR53	North 0054-0063 (10 images); no South photos	290	STW_1	2	4	
21 to 22	20	20-320@54	320@54	No RDI photos	455	60	3	5	
23 to 24	21	21-314@45	314@45	No RDI photos	320	70	4	5	
25 to 26	22	22-H41@312	H41@312	No RDI photos	275	89	2	3	
27	23	23-H41@322	H41@322	No RDI photos	300	92	2	3	
28 to 29	24	24-332@54	332@54	No RDI photos	520	20	4	6	
30 to 31	25	25-335@53	335@53	No RDI photos	360	4	3	5	
32 to 33	26	26-H41@314	H41@314	No RDI photos	640	74	1	3	
34 to 35	28	28-EDP10-H41	EDP10-H41	No RDI photos	1370	88	0	3	
36 to 37	29	29-EDP7 -HWY41 - Sim	EDP7 -HWY41	No RDI photos	2760	94	0	0	
38 to 39	30	30-EDP1-Hwy41-TR332	EDP1-H41@332-no px	No RDI photos	6760	26	0	0	
40 to 41	31	31-EDP9-HWY886-310	EDP9-HWY886@310	No RDI photos	9980	56	0	0	
	27 total	Viewpoints with green background are points photographed by RDI. Those with beige background have no RDI photos.					WTG's	24	42
		EDP Viewpoints, by RDI # (11 total)	3, 4, 7, 9, 10, 12, 16, 28, 29, 30, 31	Average Distance (m)	3739				
				Range: Low (m) - 28-EDP10	1370				
				Range: High (m) - 31-EDP9	9980				
		Number of EDP Viewpoints with Foreground WTGs	0						
		Additional Kroker Fieldtrip Viewpoints, by RDI # (9 total)	2, 5, 6, 8, 11, 13, 14, 15, 17	Average Distance	2713				
				Range: Low (m) - 6-Ralph Henry	230				
				Range: High (m) - 15-H886@TR330	6470				
		Number of Kroker Viewpoints with Foreground WTGs	3						
		Additional RDI Selected Viewpoints, by RDI # (7 total)	20, 21, 22, 23, 24, 25, 26,	Average Distance	410				
				Range: Low (m) - 22-H41@312	275				
				Range: High (m) - 26-H41@314	640				
		Number of RDI Viewpoints with Foreground WTGs	7						
		Of the total of 27 viewpoints, 8 are less than 500m from the nearest WTG (no EDP VP's), 2 more are between 500m and 1 km, (no EDP VP's), 13 more are between 1 km and 5 km (7 EDP VP's) , and 4 viewpoints are between 5 km and 10 km from the nearest WTG (2 EDP VP's). EDP 9 is furthest at just under 10 km.							



12 - Sedalia South 973-984 - 12 images



90°
180° Width of View



Viewpoint

12 - Sedalia TR 314 @ RR 54 South

18+ WTG's in View in Single Frame

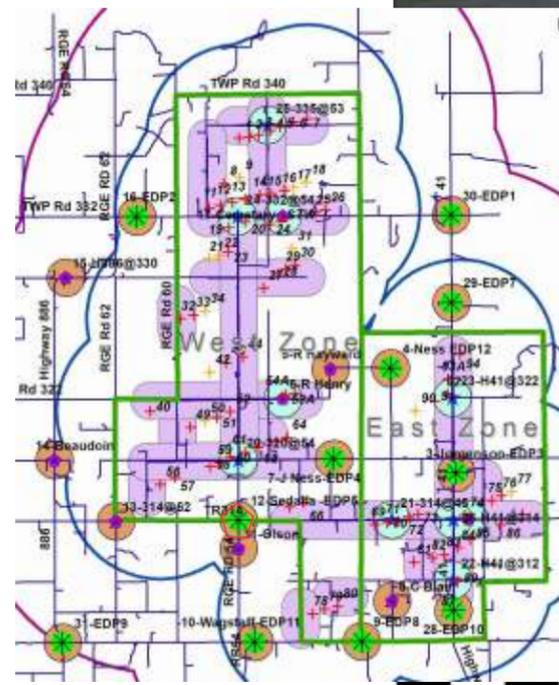
Closest WTG is 2750m



Single Frame 50mm lens = 40 deg. FOV

12 - Sedalia TR 314 @ RR 54 South

E



Viewpoint



North View

12 - Sedalia North 983-994 - 12 images

Closest WTG is 2750m



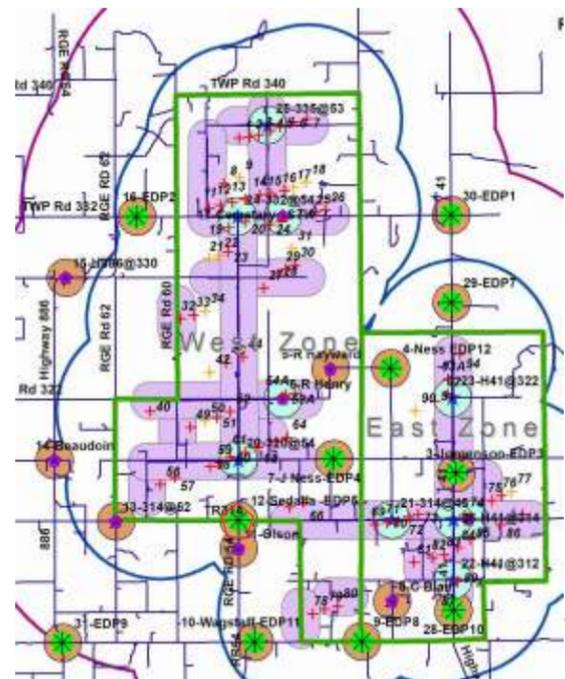
Single Frame 50mm lens = 40 deg. FOV

0°

90°

180°

180° Width of View



Viewpoint

12 - Sedalia TR 314 @ RR 54 North

20+ WTG's in View in Single Frame

Closest WTG is 2750m

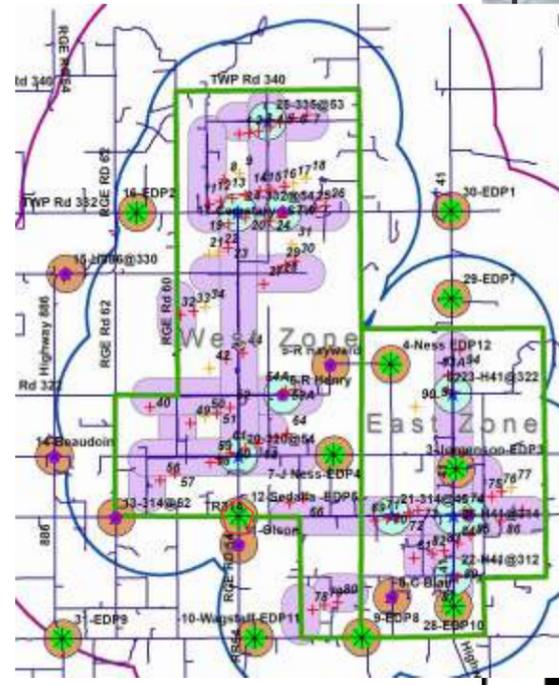


Single Frame 50mm lens = 40 deg. FOV

12 - Sedalia TR 314 @ RR 54 North

330

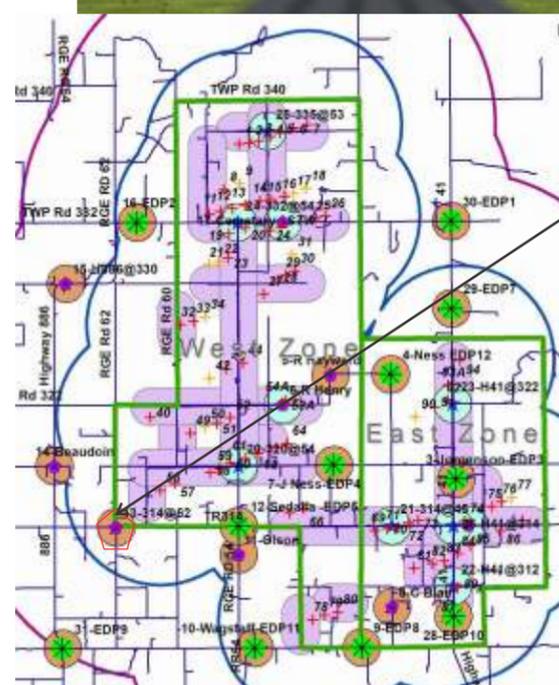
N



Viewpoint



90°
180° Width of View
180°

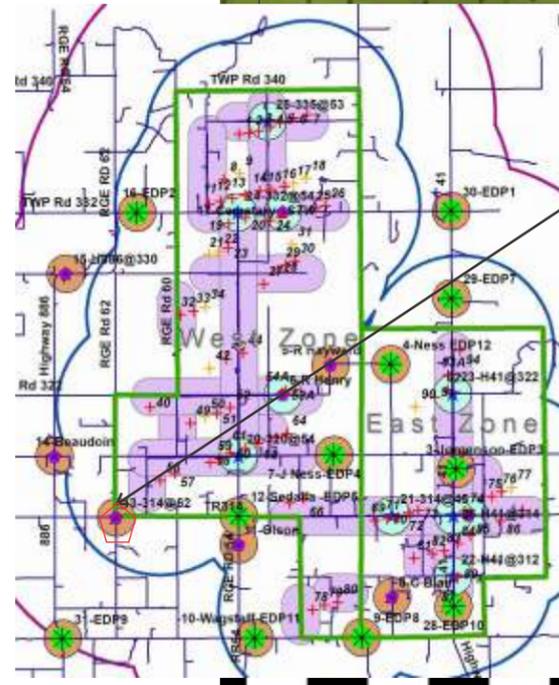


Viewpoint

13 TR 314 @ RR 62

30+ WTG's in View in Single Frame

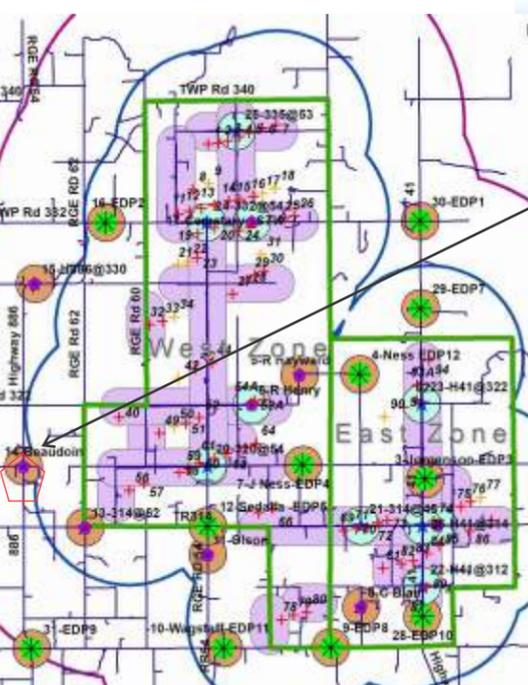
Closest WTG is 3075m



Single Frame 50mm lens = 40 deg. FOV

13 TR 314 @ RR 62 - Single Frame Northeast View





Viewpoint

14 - Kent & Don Hwy 886 @ TR320

14 - West View

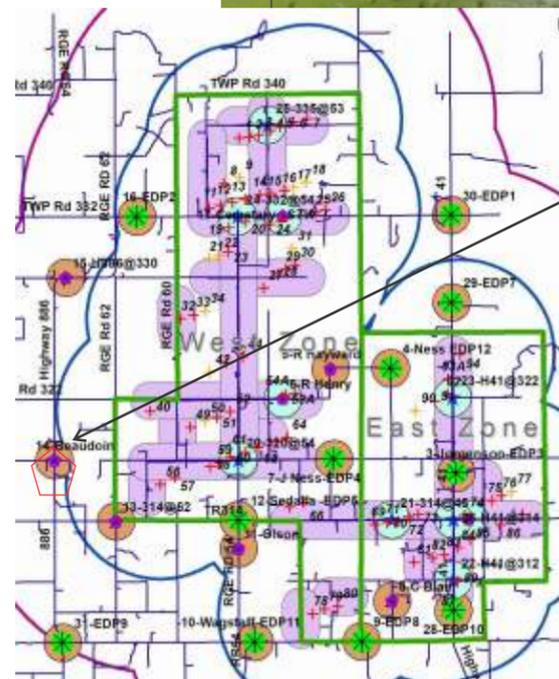
30+ WTG's in View in Single Frame - Half Above Hub Height Only

Closest WTG is 5770m



Single Frame 50mm lens = 40 deg. FOV

14 - Kent & Don Hwy 886 @ TR320 - Single Frame East view

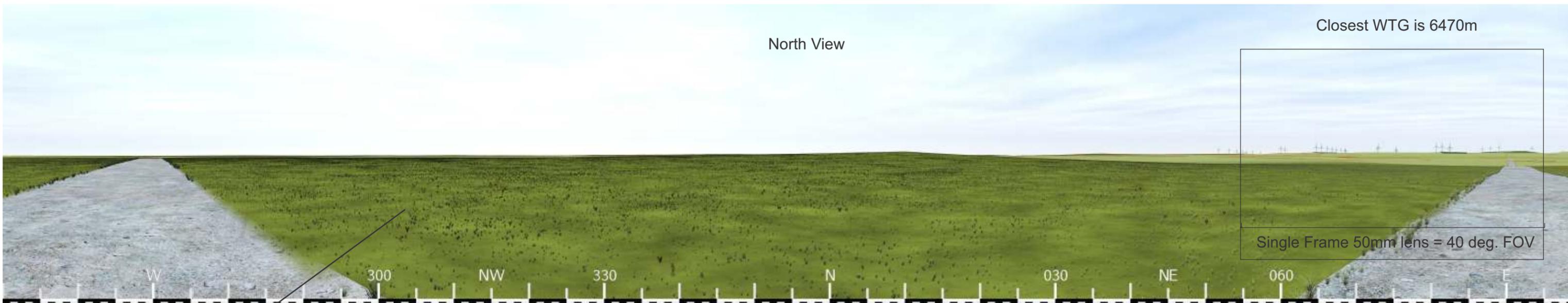


Viewpoint

E



North View - 0025-0035 (11 images)



North View

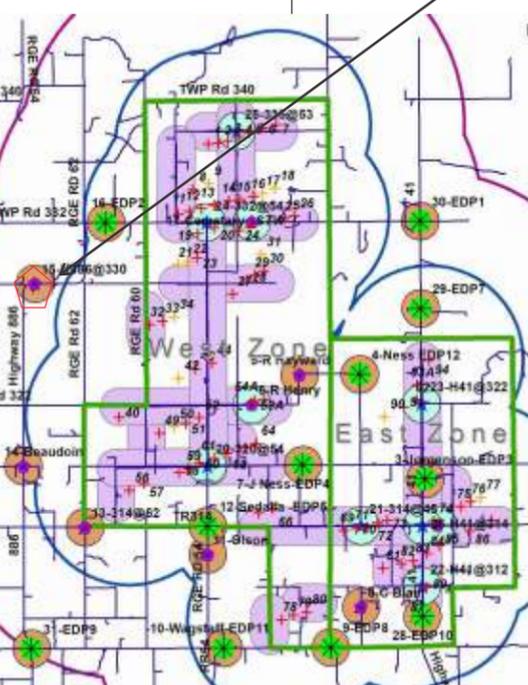
Closest WTG is 6470m

Single Frame 50mm lens = 40 deg. FOV

90°
180° Width of View

180°

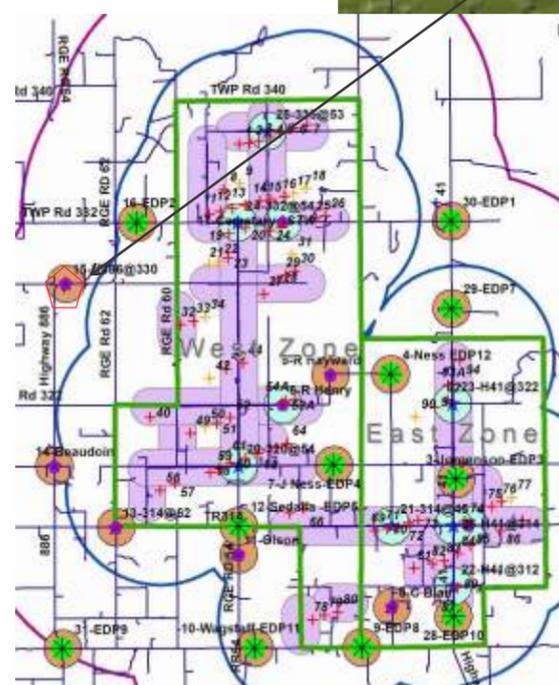
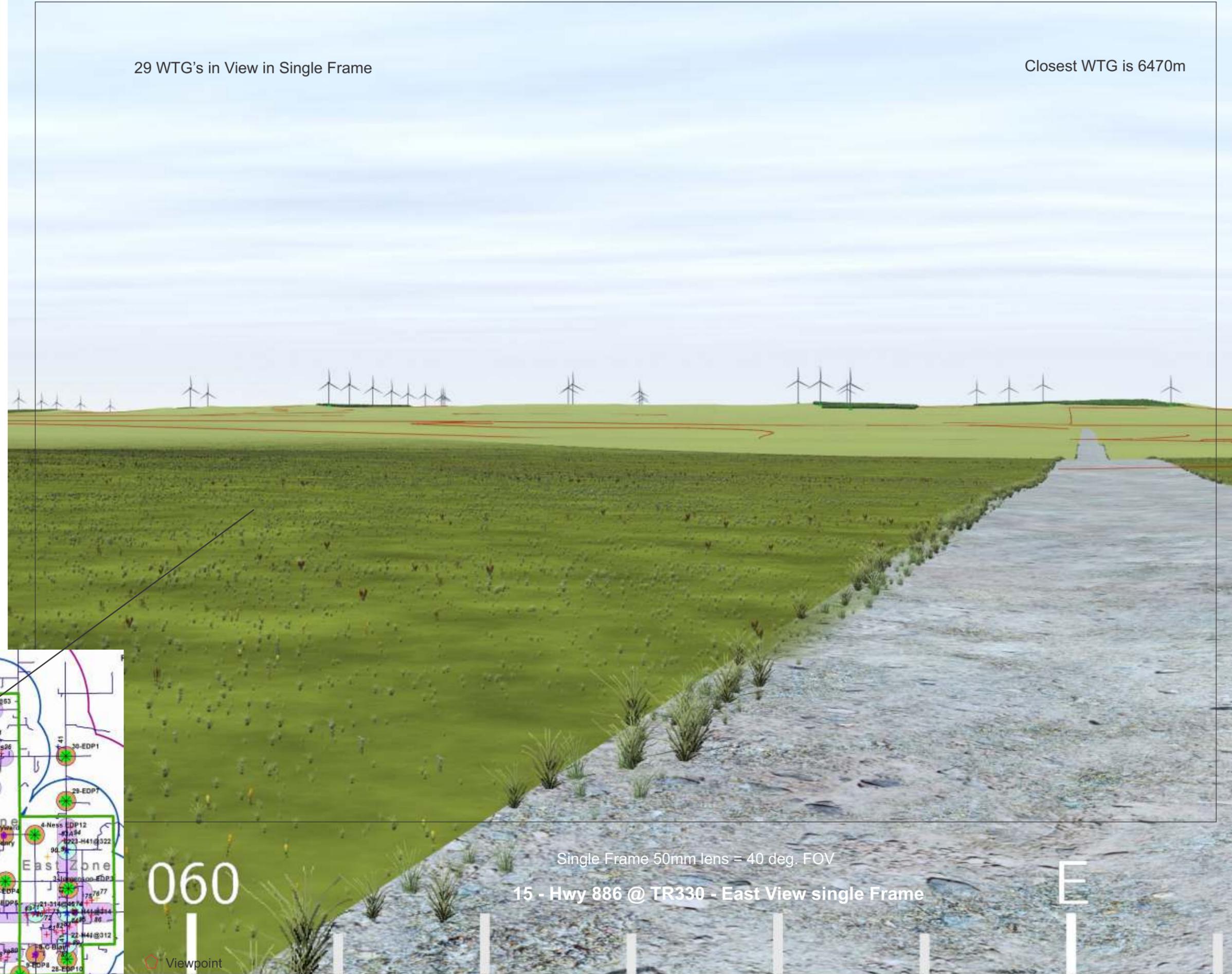
15 - Hwy 886 @ TR330 - North View



Viewpoint

29 WTG's in View in Single Frame

Closest WTG is 6470m



060

Single Frame 50mm lens = 40 deg. FOV

15 - Hwy 886 @ TR330 - East View single Frame

E

Viewpoint



South View - 0016-0024 (9 images)

Closest WTG is 6470m



South View

Single Frame 50mm lens = 40 deg. FOV

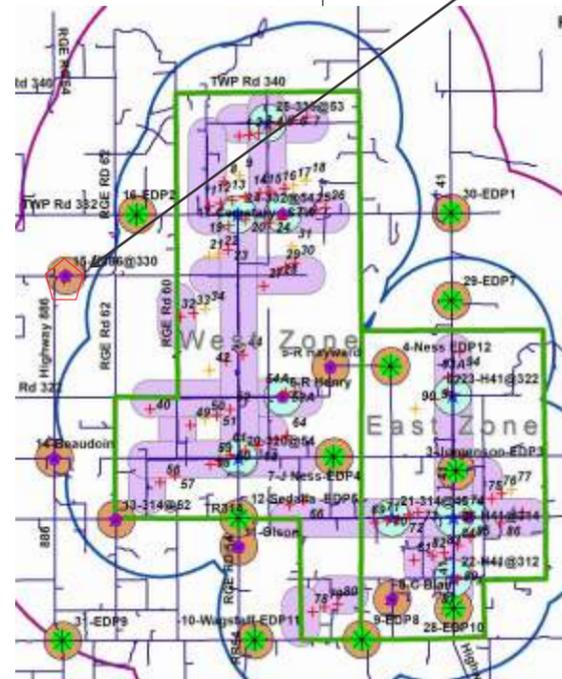
060 E 120 SE 150 S 210 SW 240

90°

180° Width of View

180°

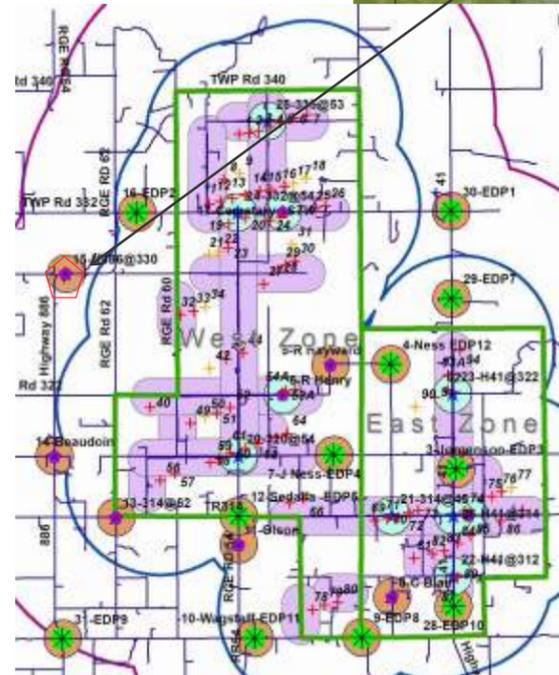
15 - Hwy 886 @ TR330 - South



Viewpoint

18+ WTG's in View in Single Frame

Closest WTG is 6470m



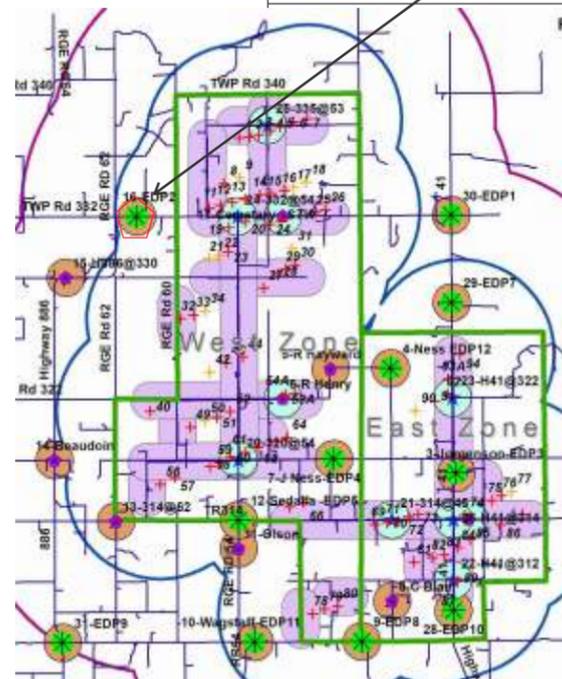
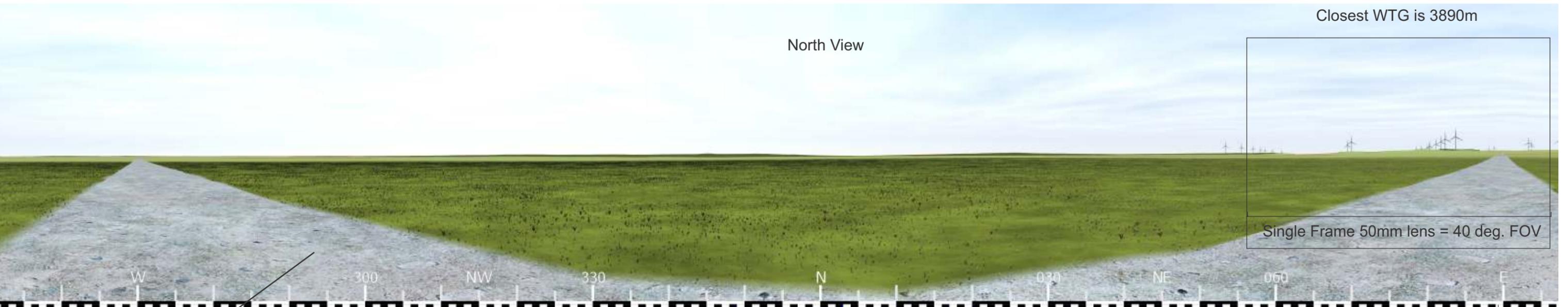
Single Frame 50mm lens = 40 deg. FOV

15 - Hwy 886 @ TR330 - East View Single Frame

Viewpoint



North View - 0045-0053 (9 images)

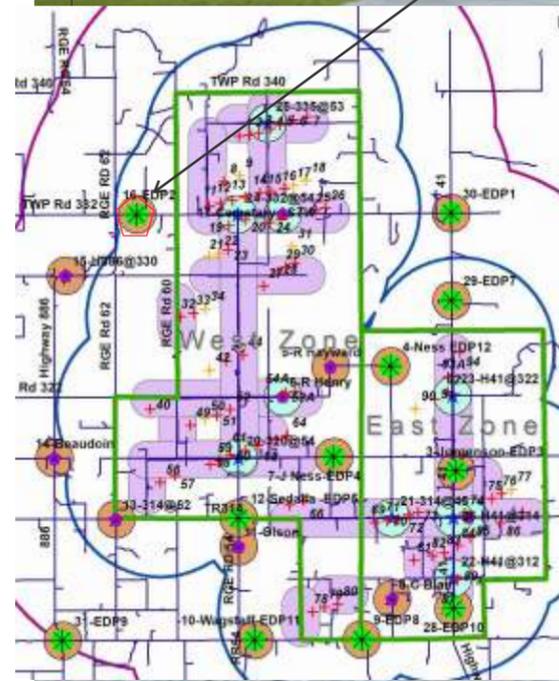


Viewpoint

16 - EDP2 - TR332 East of RR62 - North View

17 WTG's in View in Single Frame

Closest WTG is 3890m



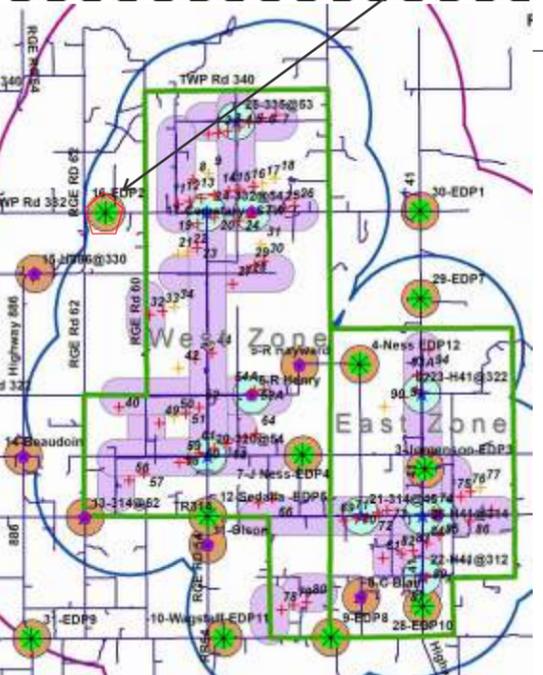
Single Frame 50mm lens = 40 deg. FOV

16 - EDP2 - TR332 East of RR63 - East View Single Frame

Viewpoint



South View - 0036-0045 (10 images)



Viewpoint

16 - EDP2 - TR332 East of RR63 - South View

28+ WTG's in View in Single Frame

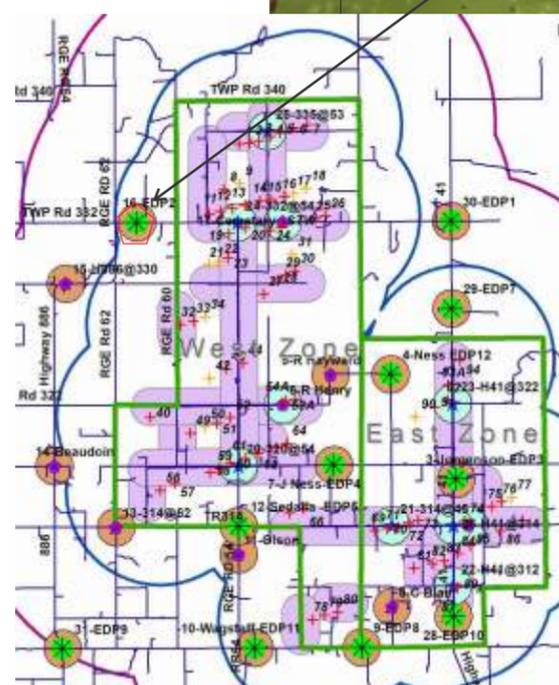
Closest WTG is 3890m - See previous page



Single Frame 50mm lens = 40 deg. FOV

16 - EDP2 - TR332 East of RR63 - South View

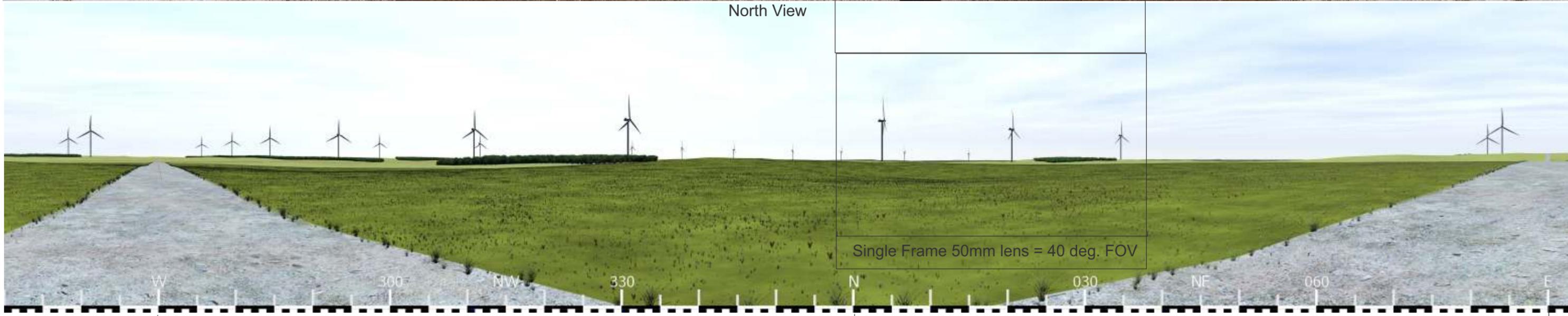
150



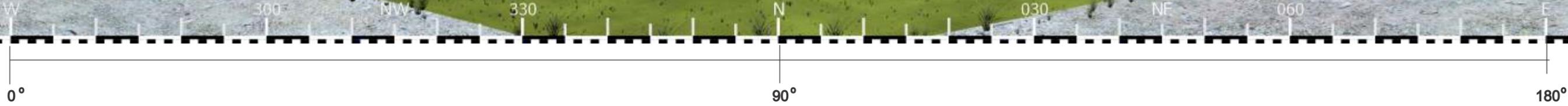


North View

Transmission Line Crossing



Single Frame 50mm lens = 40 deg. FOV



180° Width of View

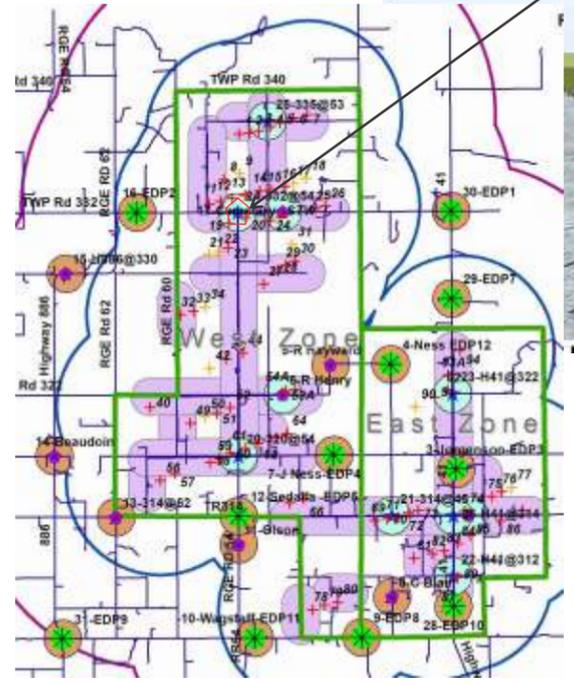
Closest WTG is 290m



South View



WTG's in close proximity in both directions

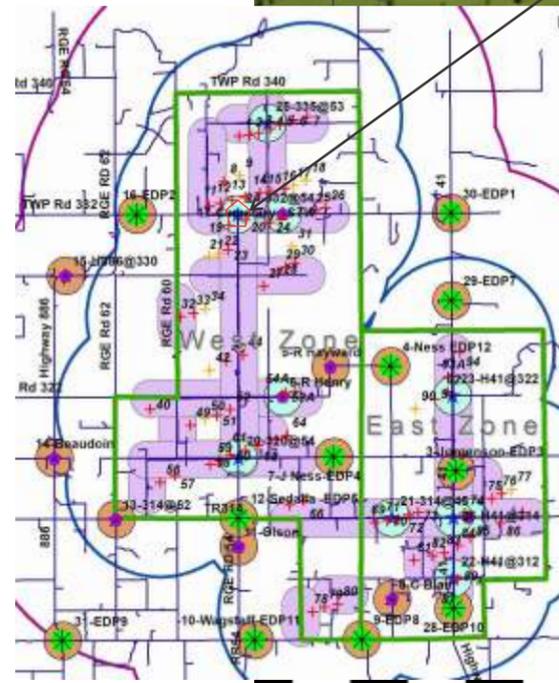


Viewpoint

17 - Cemetary - TR 332

6 WTG's in View in Single Frame

Closest WTG is 290m - see previous page

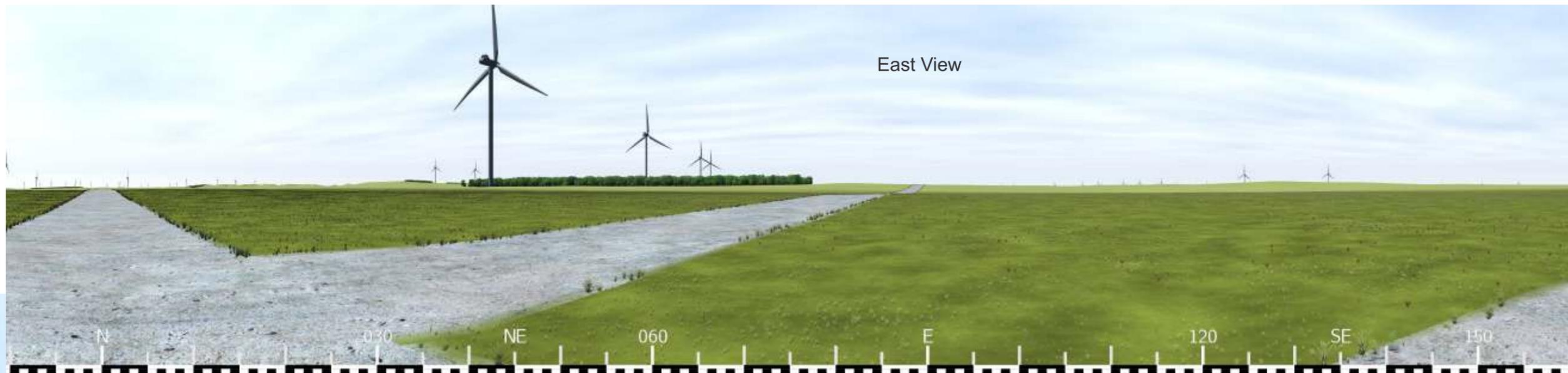


Single Frame 50mm lens = 40 deg. FOV

17 - Cemetary - TR 332 - NNE Single Frame View

030

Viewpoint



East View

N 030 NE 060 E 120 SE 150

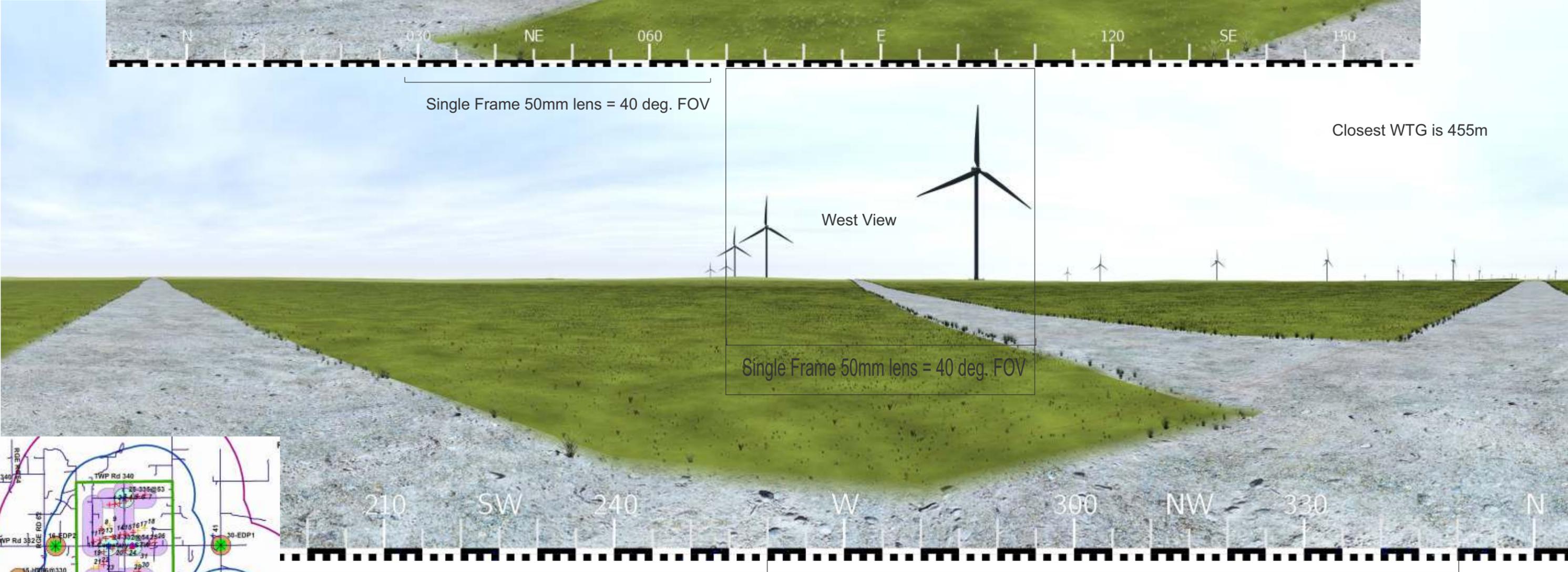
Single Frame 50mm lens = 40 deg. FOV

Closest WTG is 455m



West View

Single Frame 50mm lens = 40 deg. FOV



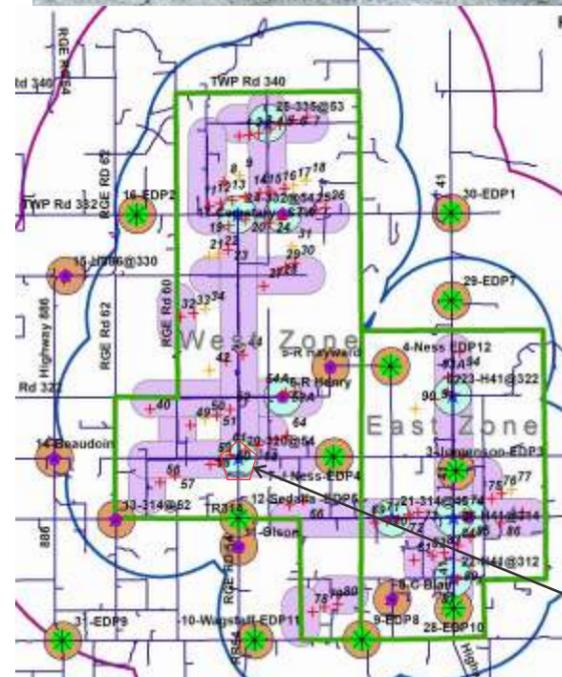
210 SW 240 W 300 NW 330 N

90°

180° Width of View

180°

20 - Rg Rd 54 @ Twp Rd 320



Viewpoint

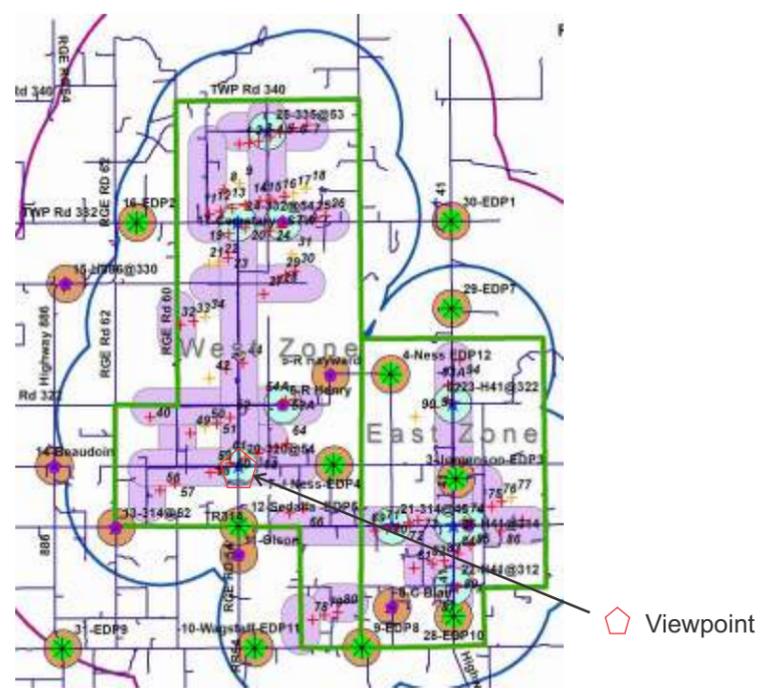
4 WTG's in View in Single Frame

Closest WTG is 455m

Dark Colour of Wind Turbines due to back-lighting from this perspective



20 - Rg Rd 54 @ Twp Rd 320 - West Single Frame View



Viewpoint

Closest WTG is 320m

Single Frame 50mm lens = 40 deg. FOV

E 120 SE 150 S 210 SW 240 W

0° 90° 180°

19 WTG's in View in Single Frame - not shown on single page

180° Width of View

North View

300 NW 330 N 030 NE 060

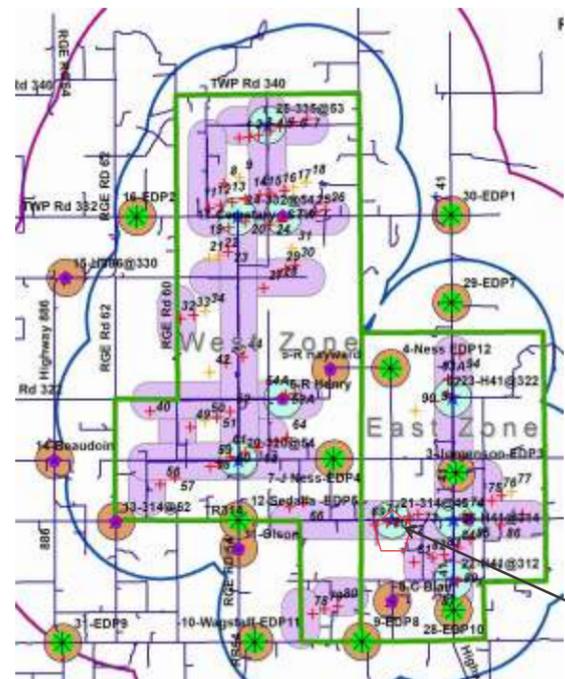
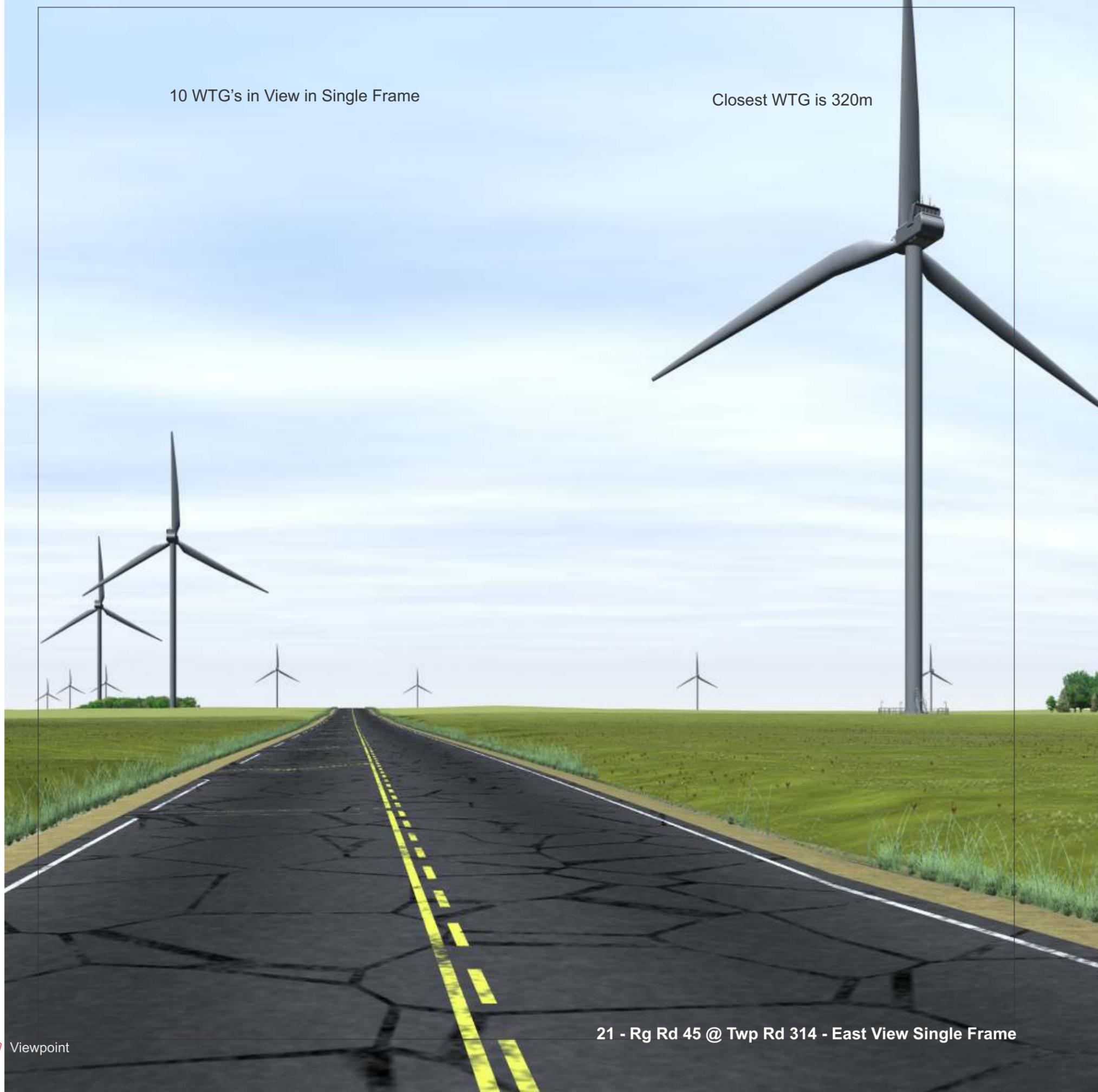
Roads for position only - surfaces may vary

21 - Rg Rd 45 @ Twp Rd 314

Viewpoint

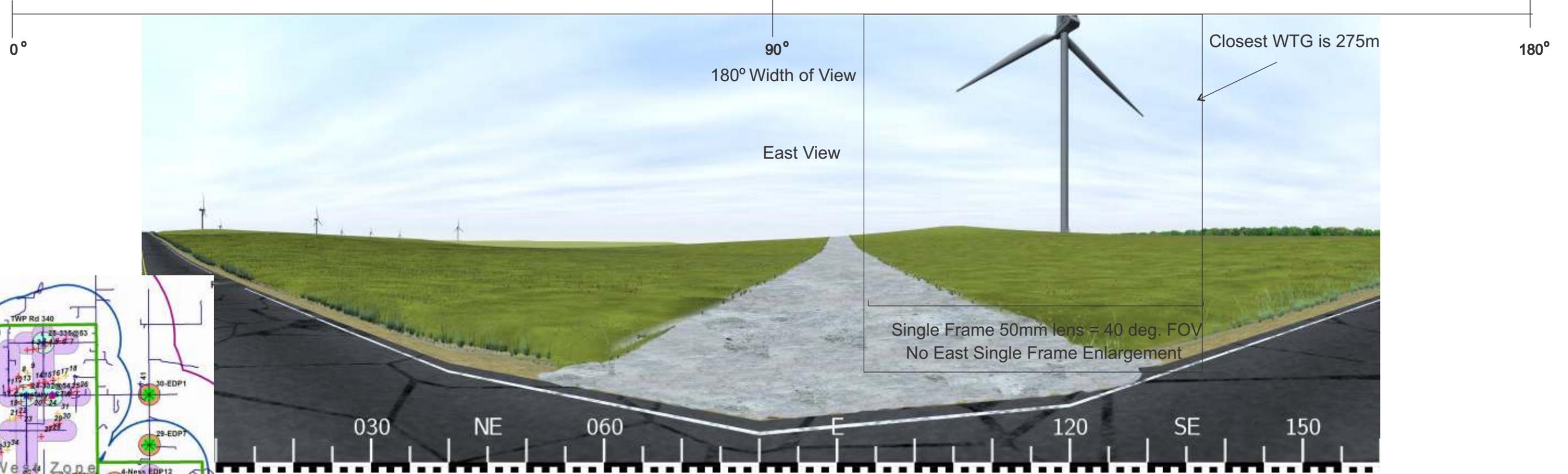
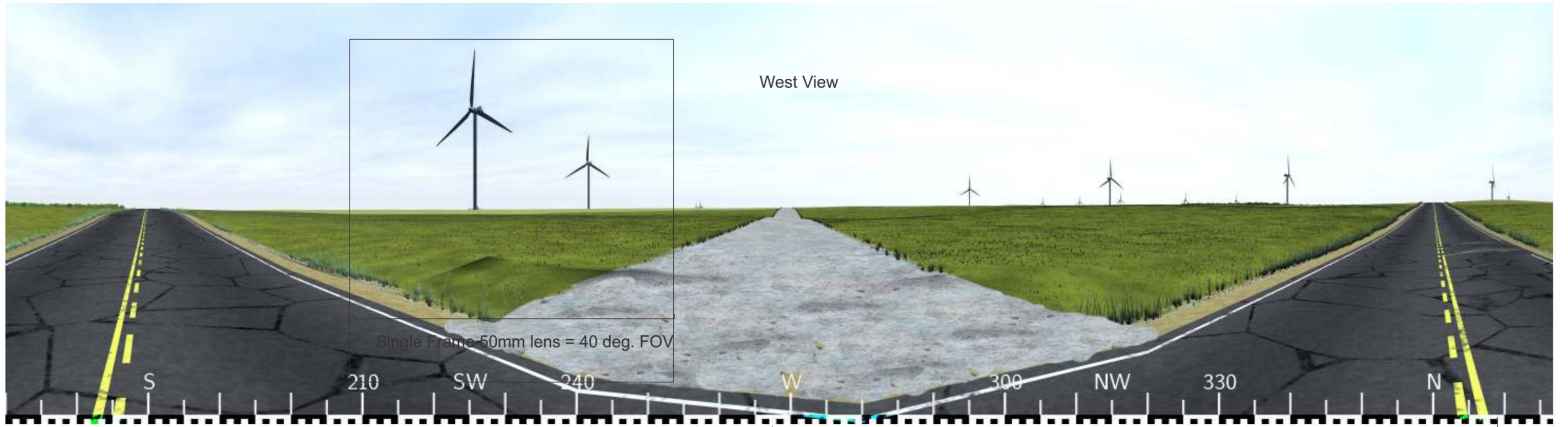
10 WTG's in View in Single Frame

Closest WTG is 320m

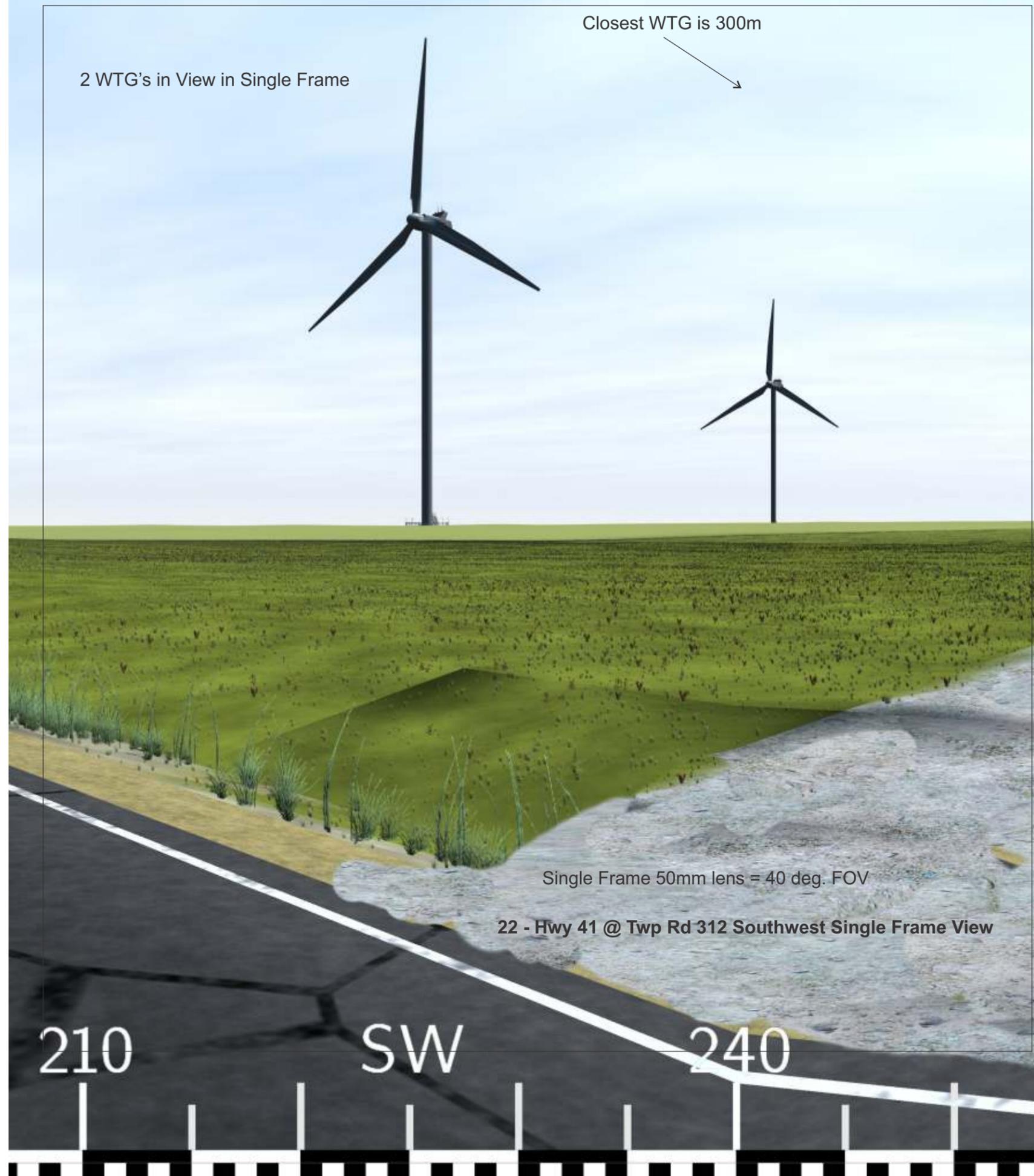


Viewpoint

21 - Rg Rd 45 @ Twp Rd 314 - East View Single Frame



22 - Hwy 41 @ Twp Rd 312



2 WTG's in View in Single Frame

Closest WTG is 300m

Closest WTG is 275m
(see previous page)

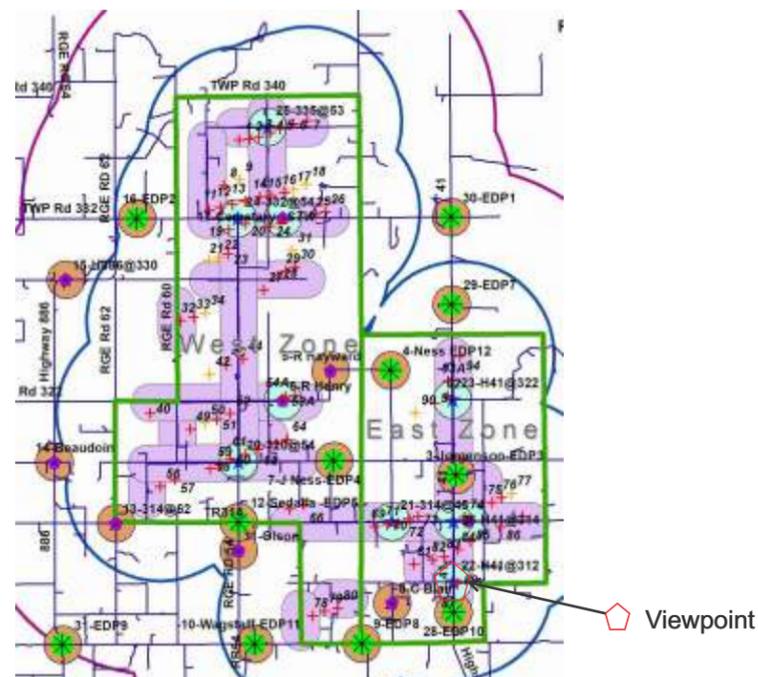
Single Frame 50mm lens = 40 deg. FOV

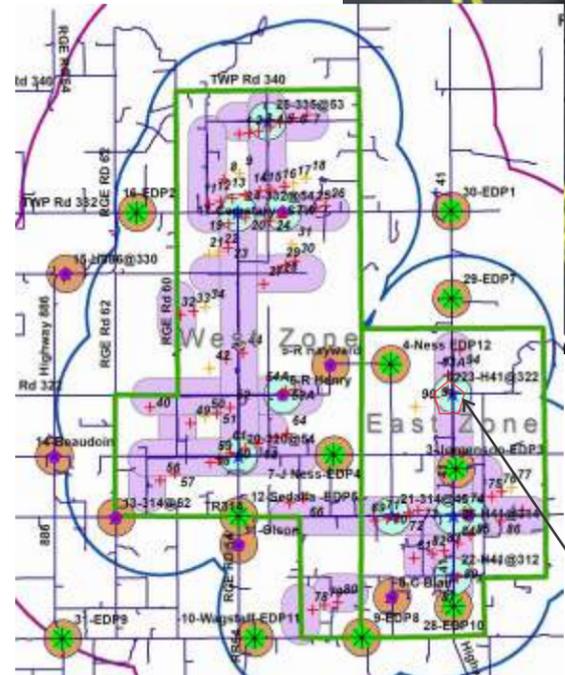
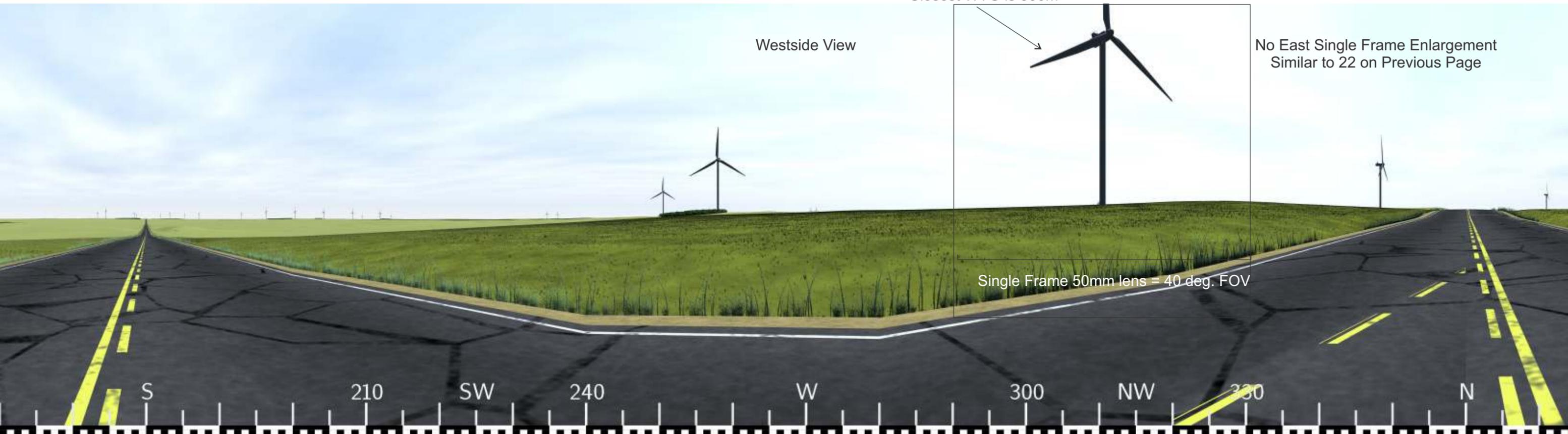
22 - Hwy 41 @ Twp Rd 312 Southwest Single Frame View

210

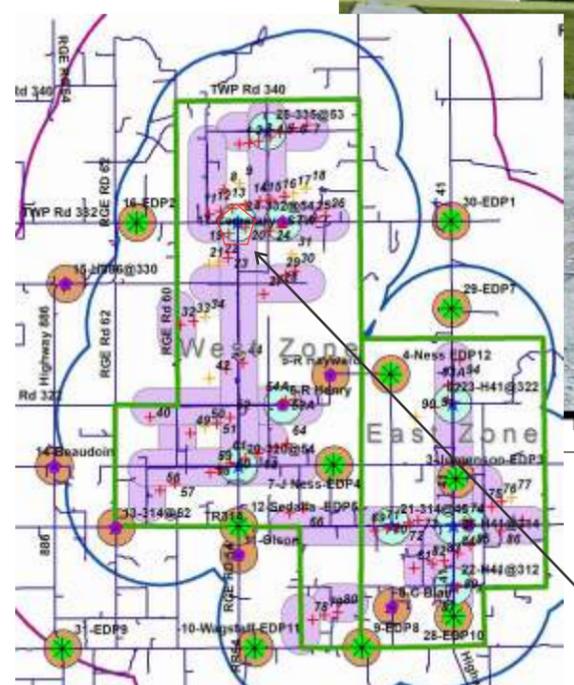
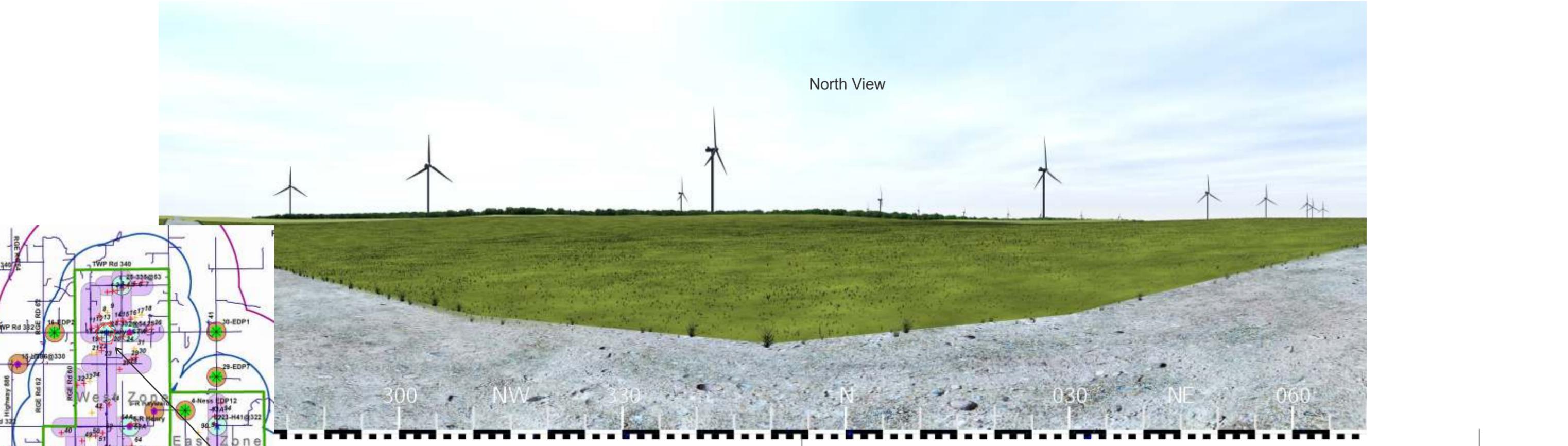
SW

240





23 - Hwy 41 @ Twp Rd 322



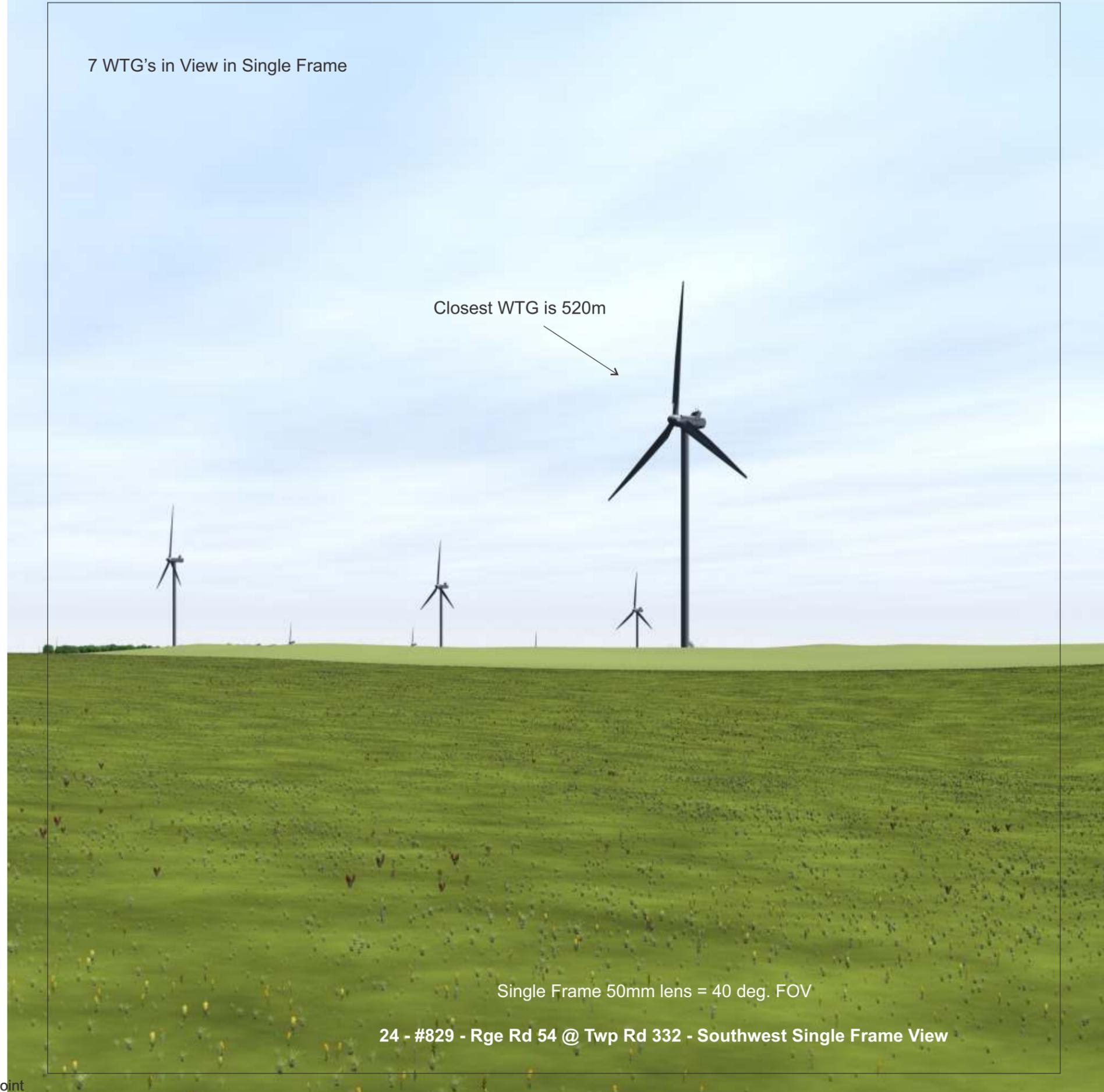
90°
180° Width of View

24 - #829 - Rge Rd 54 @ Twp Rd 332

180°

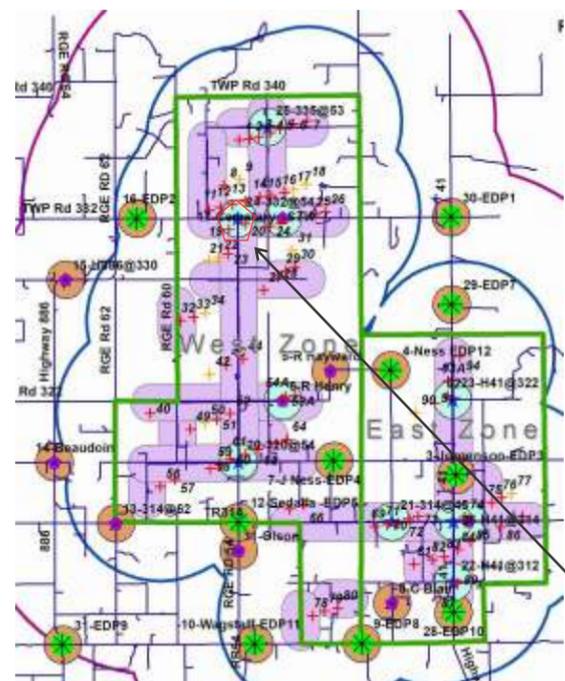
7 WTG's in View in Single Frame

Closest WTG is 520m

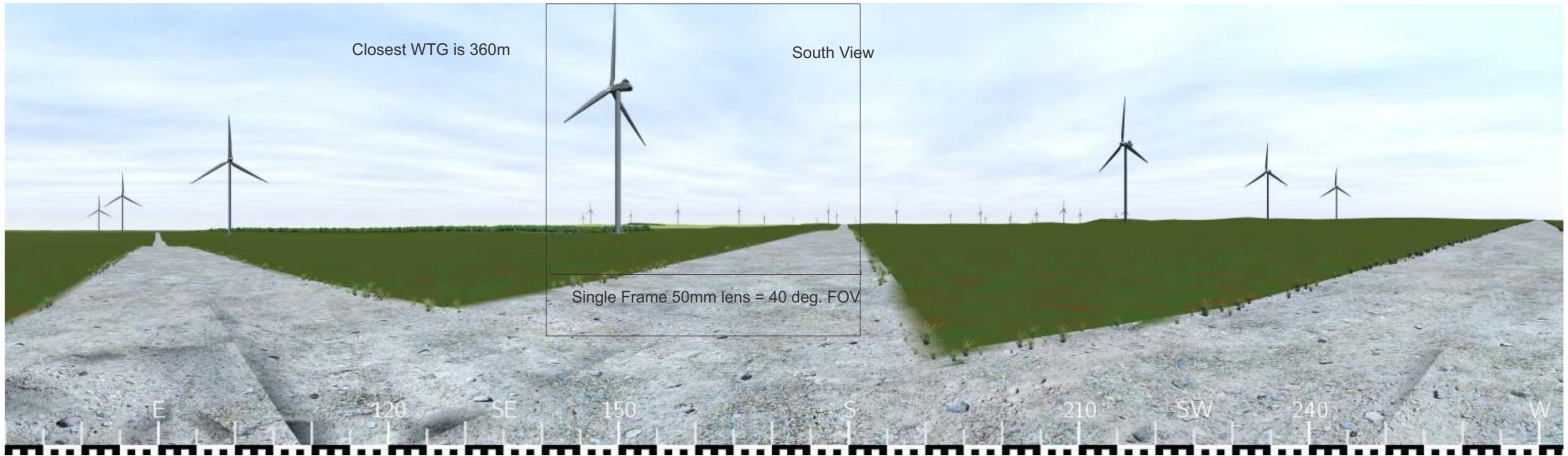


Single Frame 50mm lens = 40 deg. FOV

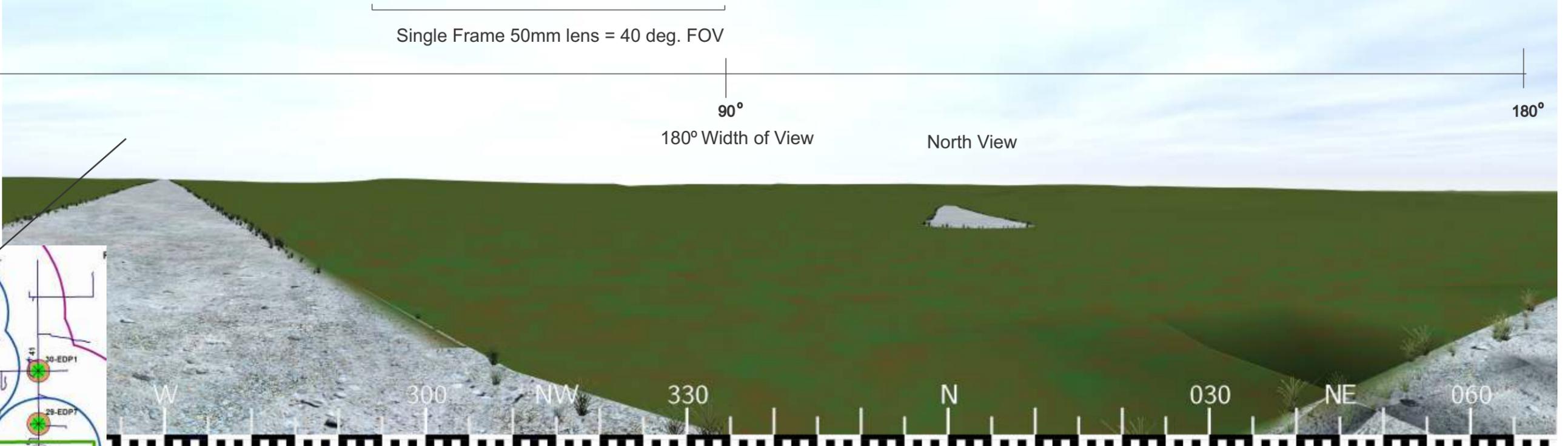
24 - #829 - Rge Rd 54 @ Twp Rd 332 - Southwest Single Frame View



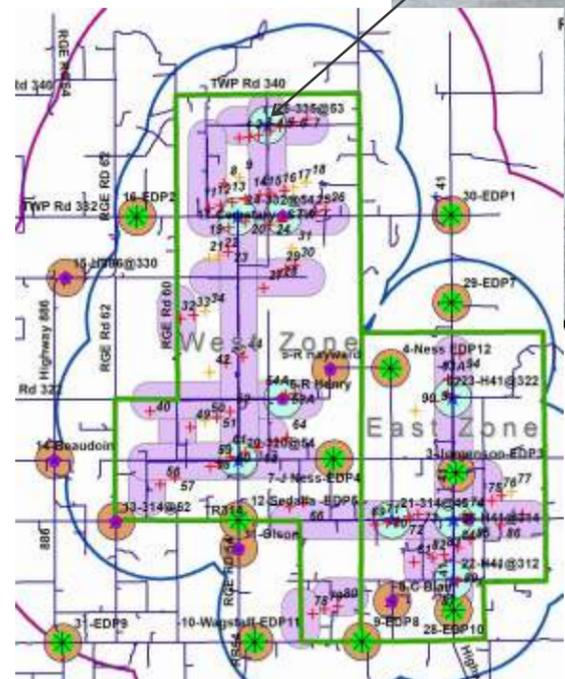
Viewpoint



Single Frame 50mm lens = 40 deg. FOV



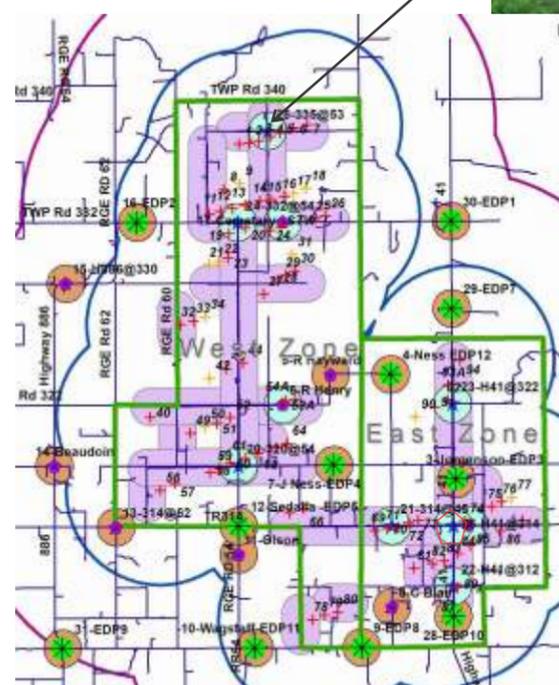
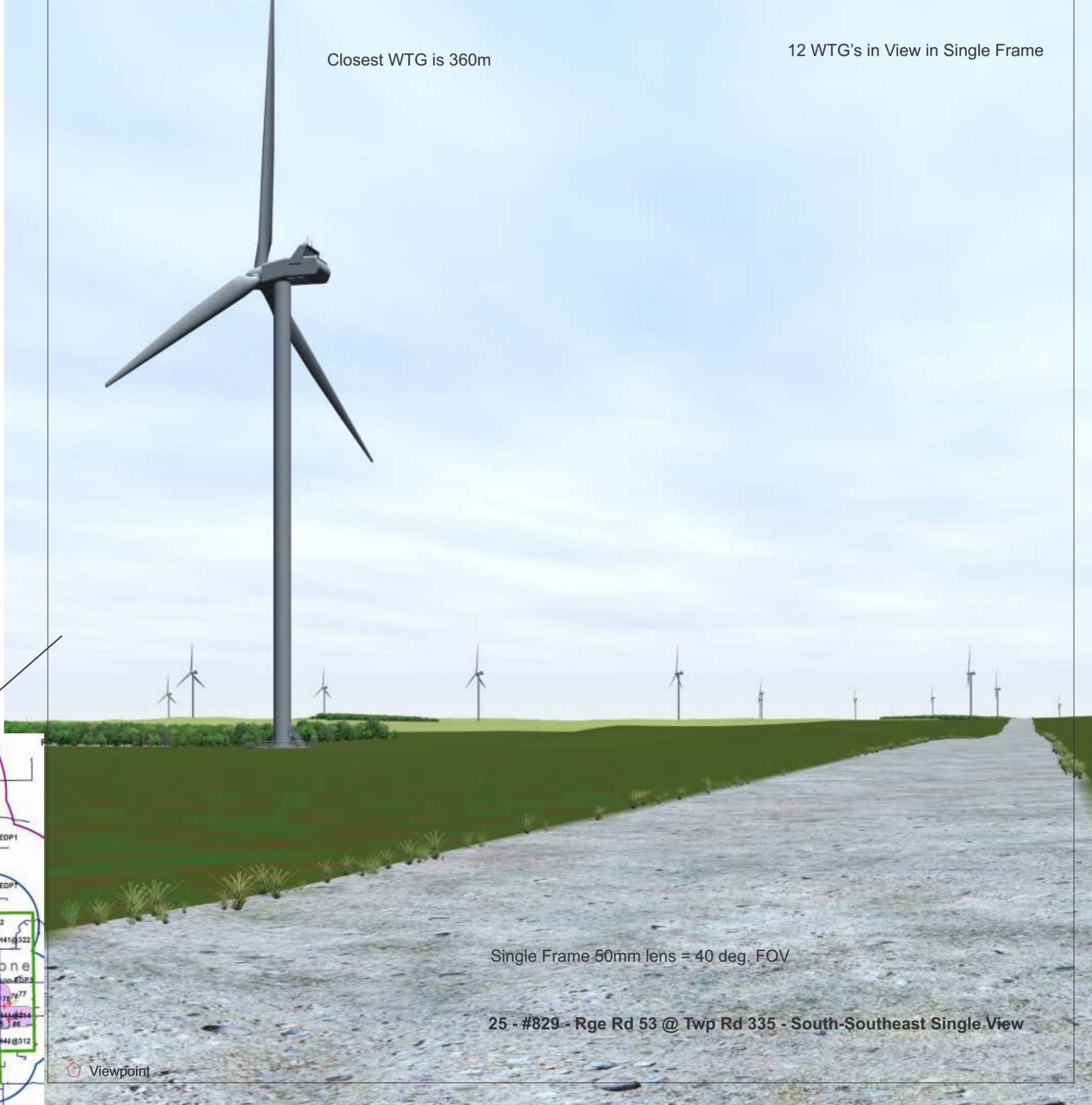
25 - #829 - Rge Rd 53 @ Twp Rd 335



Viewpoint

Closest WTG is 360m

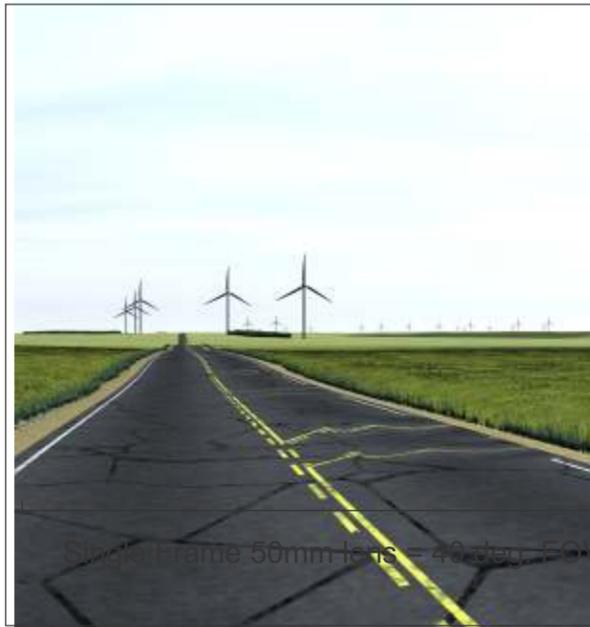
12 WTG's in View in Single Frame



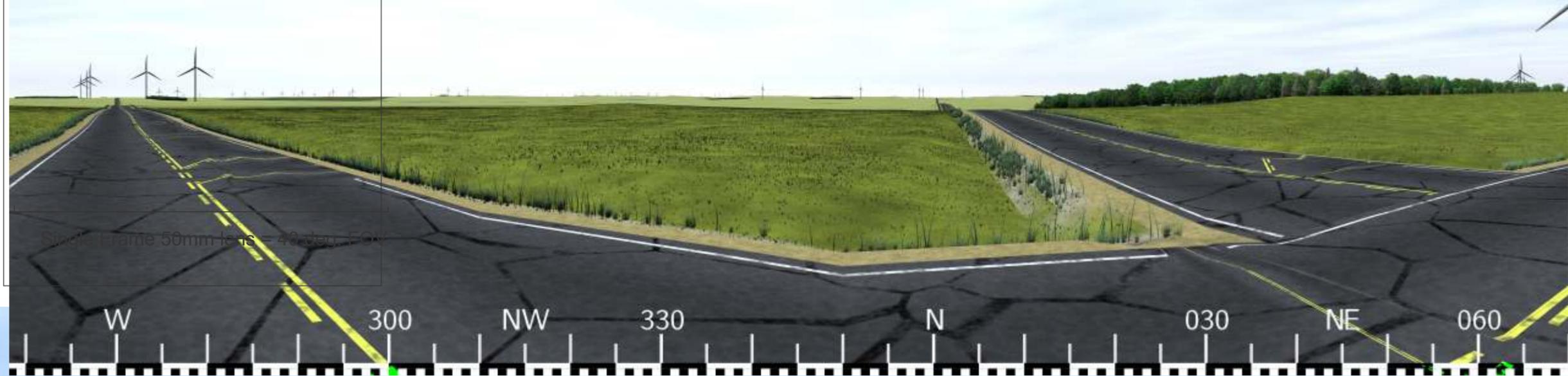
Single Frame 50mm lens = 40 deg. FOV

25 - #829 - Rge Rd 53 @ Twp Rd 335 - South-Southeast Single View

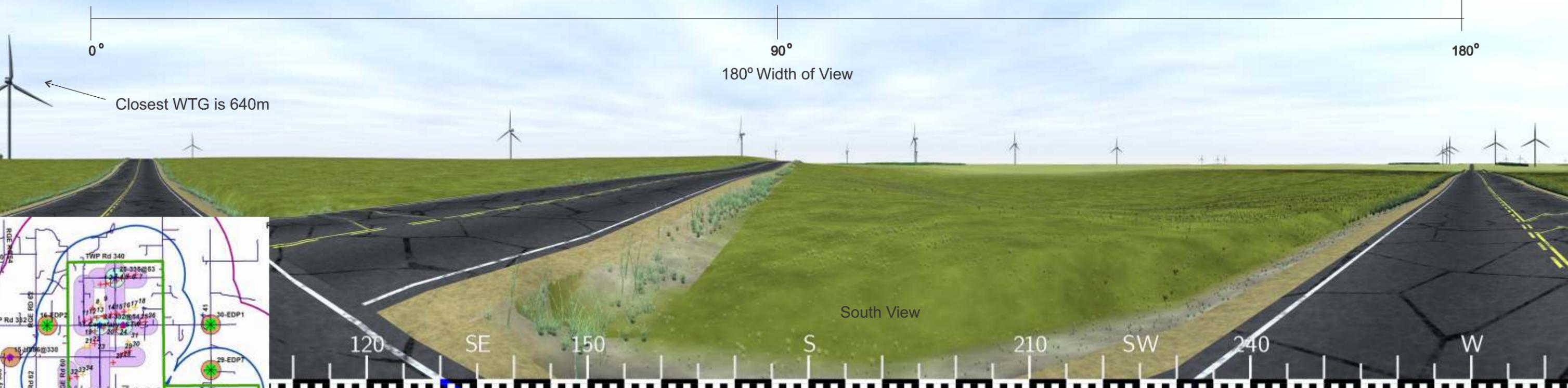
Viewpoint



North View



50mm lens

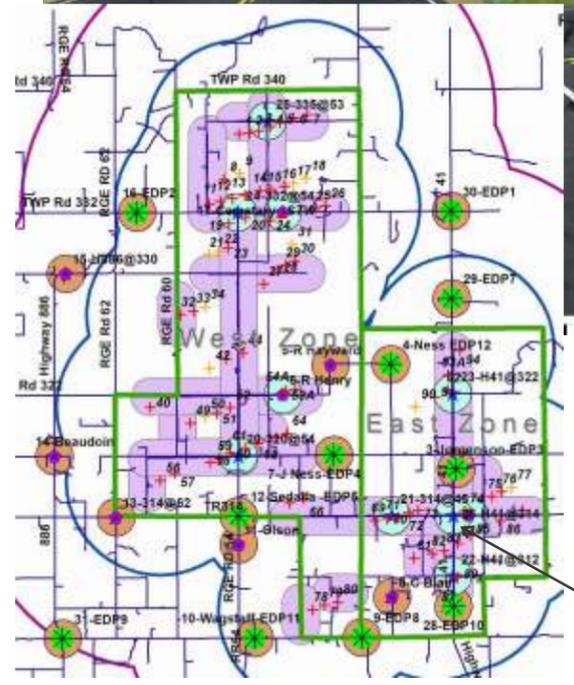


180° Width of View

Closest WTG is 640m

South View

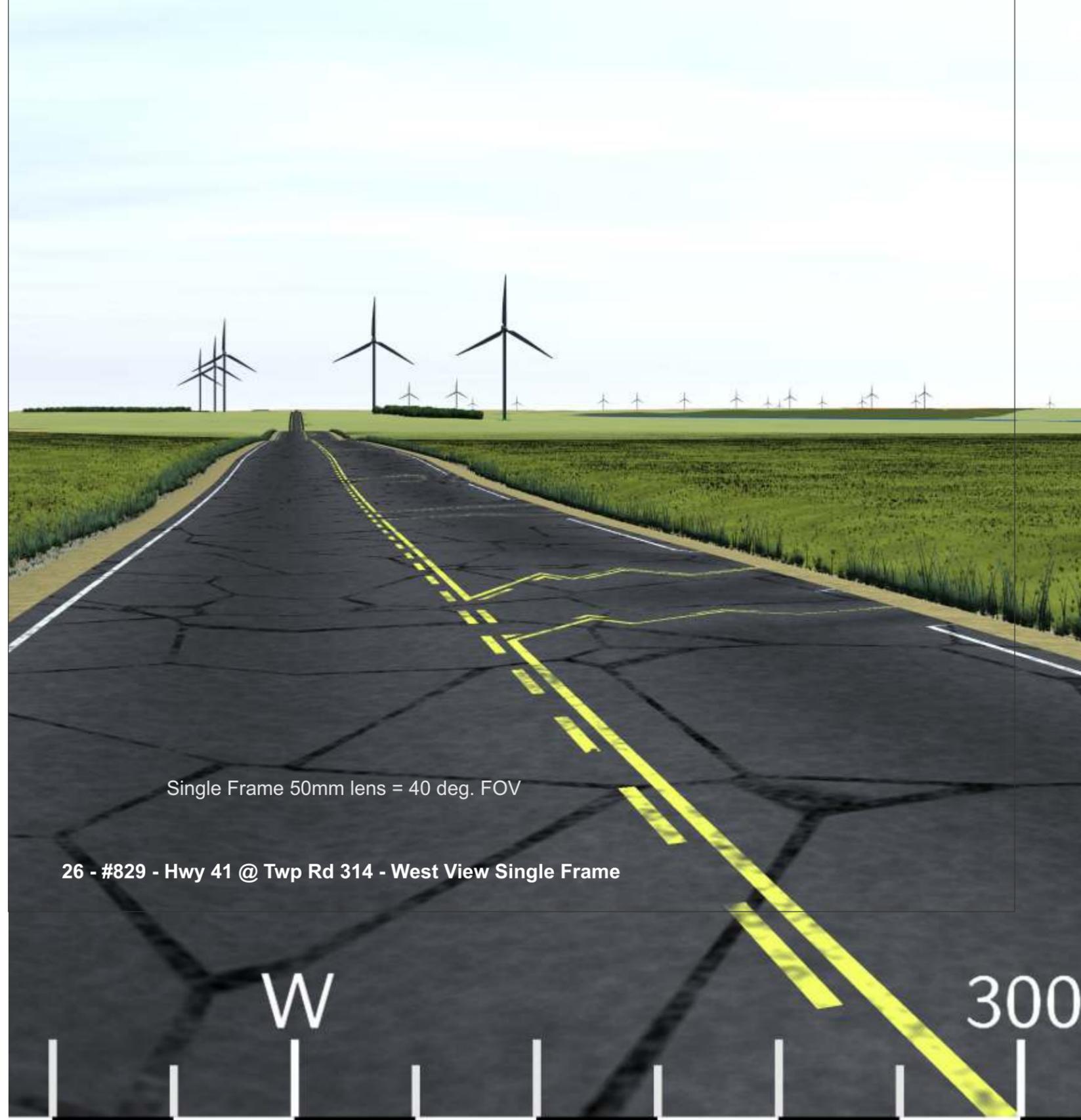
Roads for position only - surfaces may vary



Viewpoint

26 - #829 - Hwy 41 @ Twp Rd 314

21 WTG's in View in Single Frame



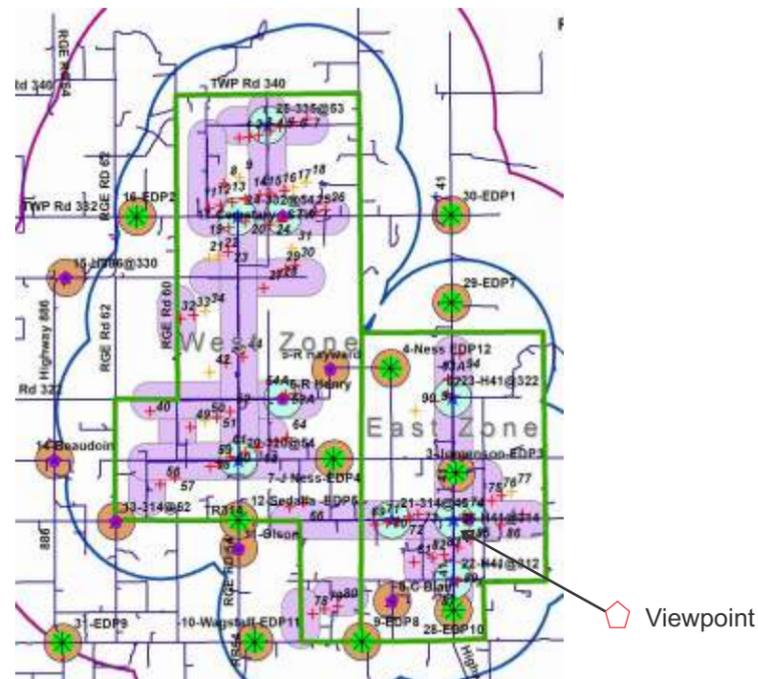
Closest WTG is 640m - not in view

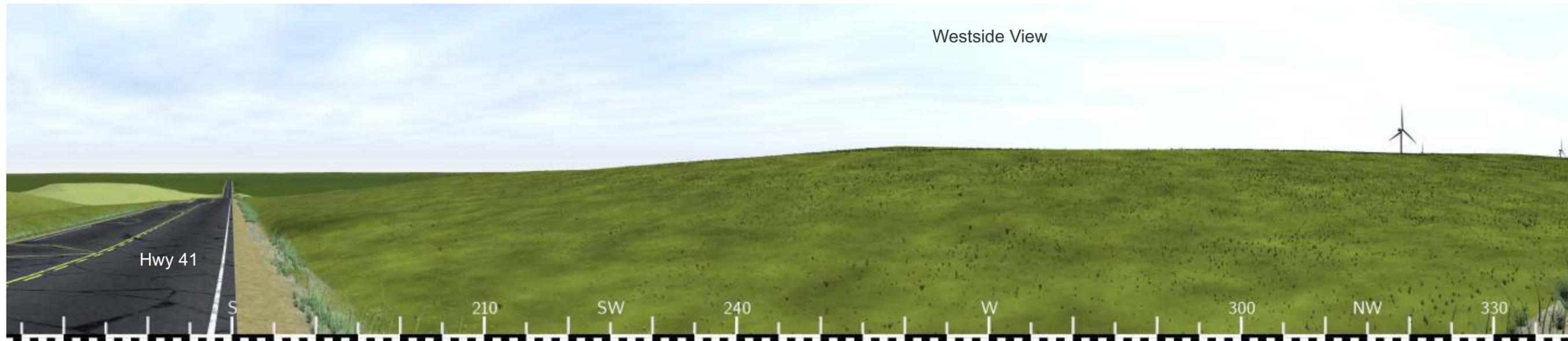
Single Frame 50mm lens = 40 deg. FOV

26 - #829 - Hwy 41 @ Twp Rd 314 - West View Single Frame

W

300





Westside View

Hwy 41

S

210

SW

240

W

300

NW

330



Eastside View

Hwy 41

Hwy 41

Single Frame 50mm lens = 40 deg. FOV

N

030

NE

000

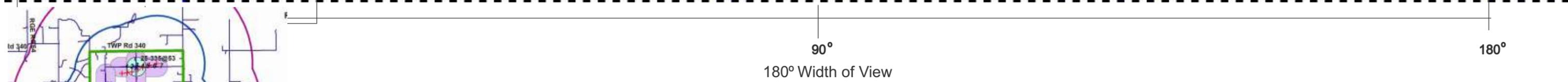
E

120

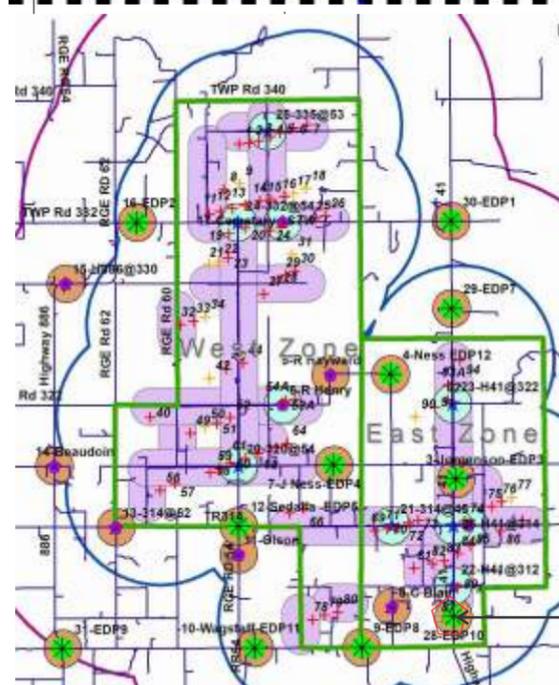
SE

150

S



180° Width of View



Closest WTG is 1370m

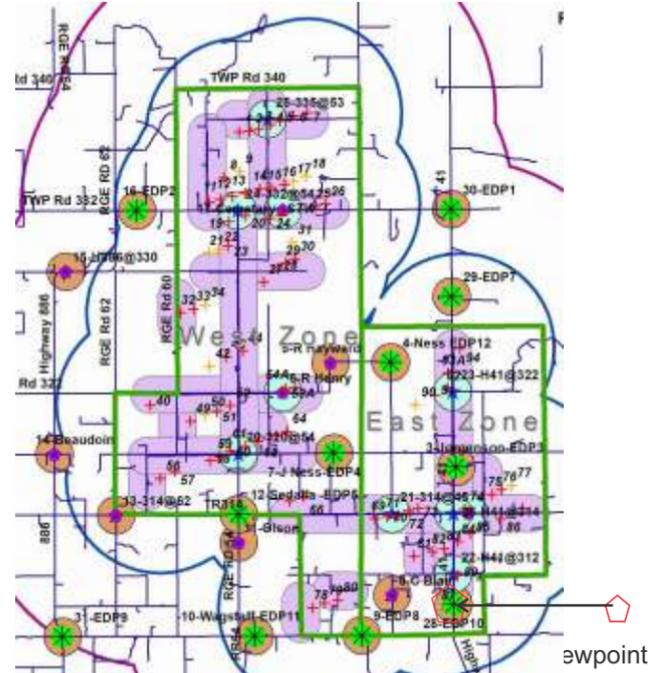
28 - EDP10 - Highway 41

Viewpoint

6 WTG's in View in Single Frame



Closest WTG is 1370m



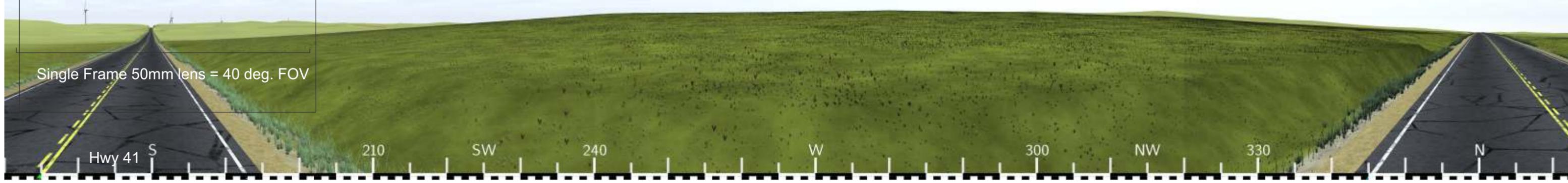
Single Frame 50mm lens = 40 deg. FOV

28 - EDP10 - Hwy41 - North View Single Frame

5 WTG's in View in Single Frame

Single Frame 50mm lens = 40 deg. FOV

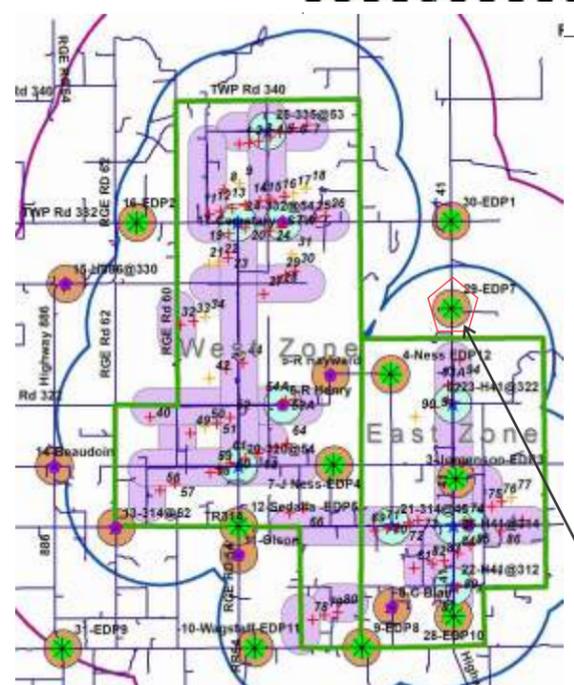
Westside View



Eastside View - no WTG's



90°
180° Width of View

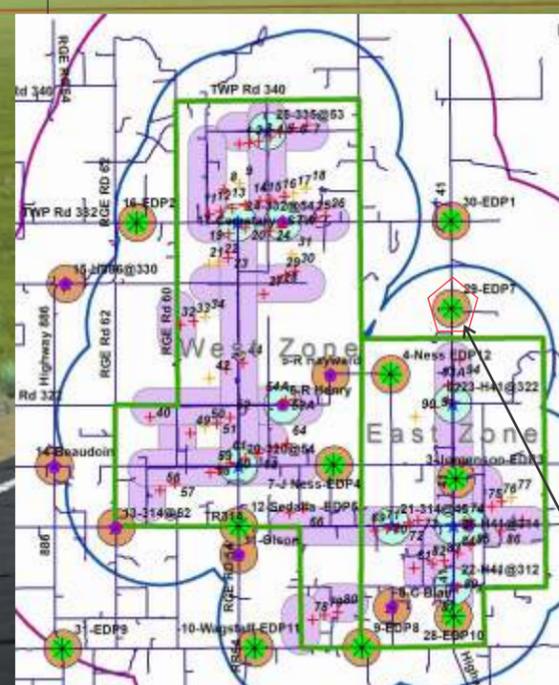


Closest WTG is 2760m

29 - EDP7 - Hwy41 - Closest WTG is 2760m

4+ WTG's in View in Single Frame

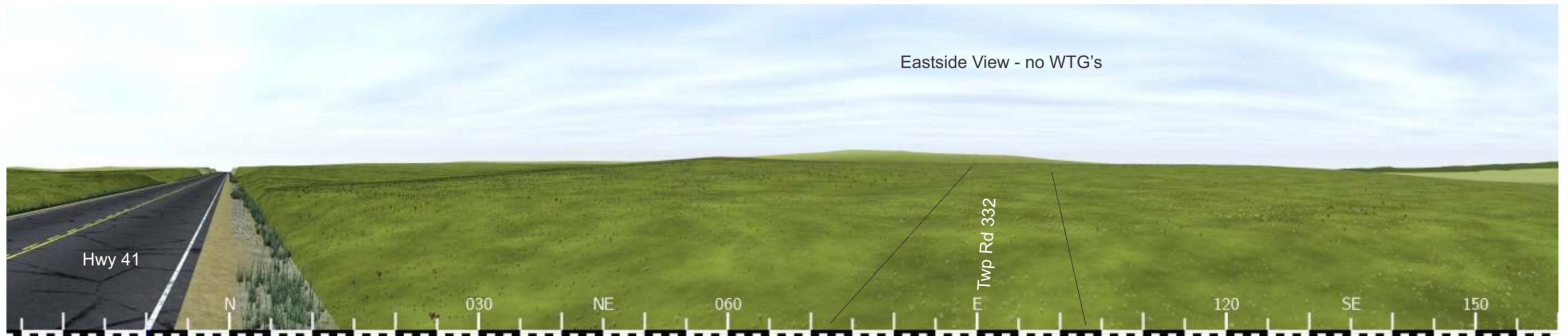
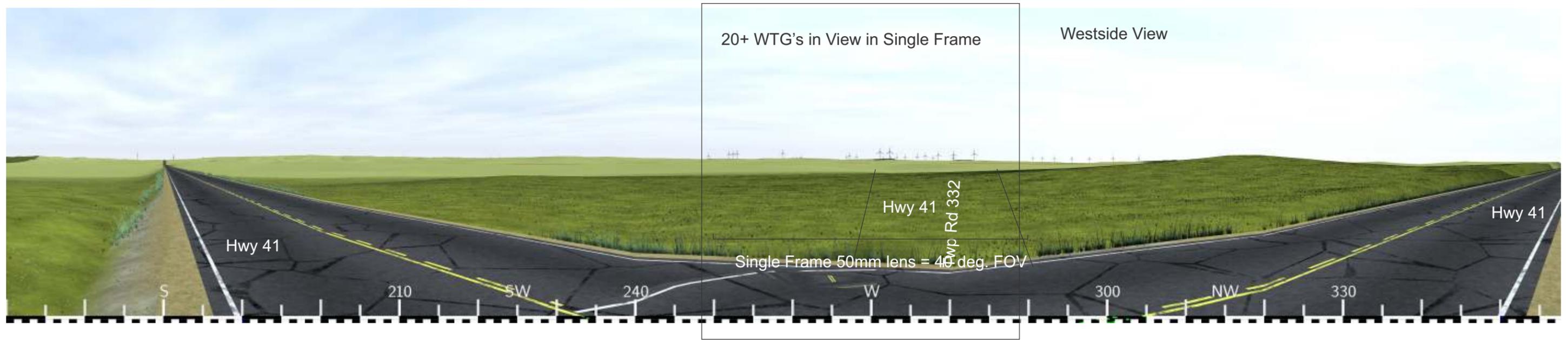
Closest WTG is 2760m



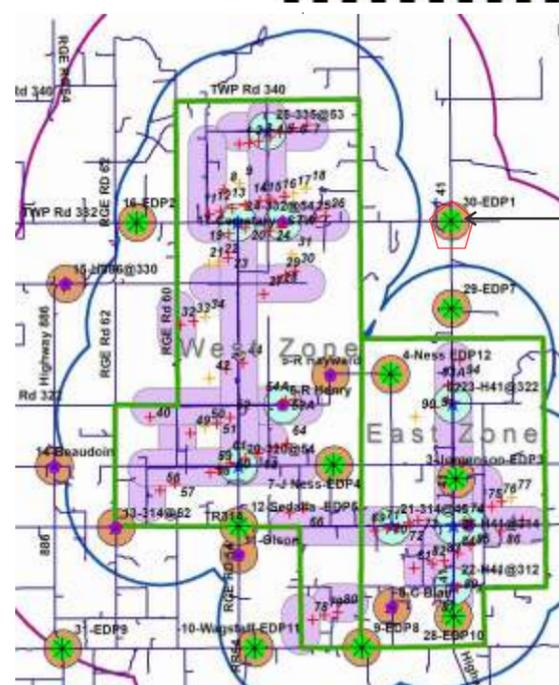
Single Frame 50mm lens = 40 deg. FOV

29 - EDP7 - Hwy41 - South Single Frame View

Viewpoint



90°
180° Width of View

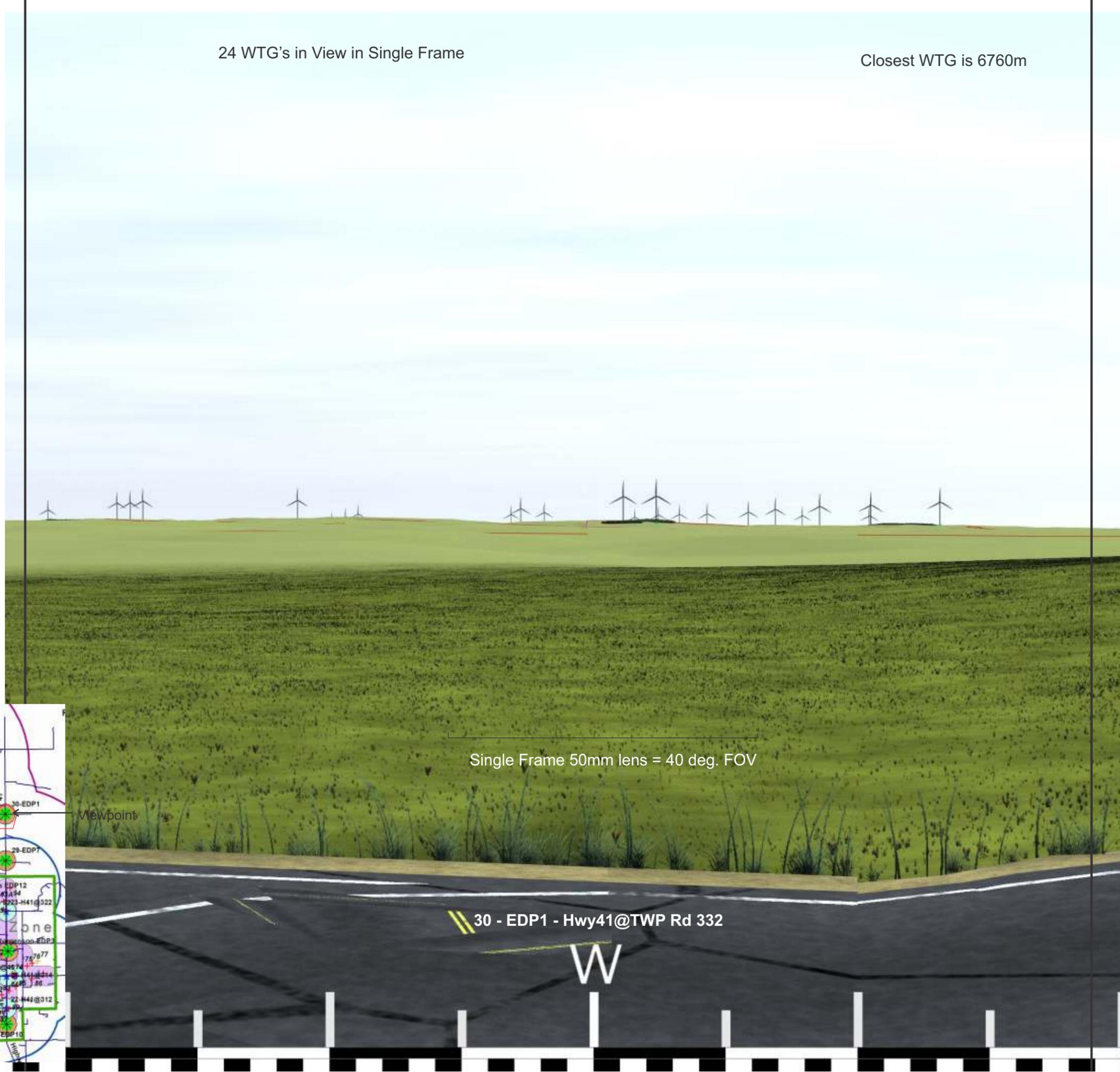


Closest WTG is 6760m

30 - EDP1 - Hwy41@TWP Rd 332

24 WTG's in View in Single Frame

Closest WTG is 6760m

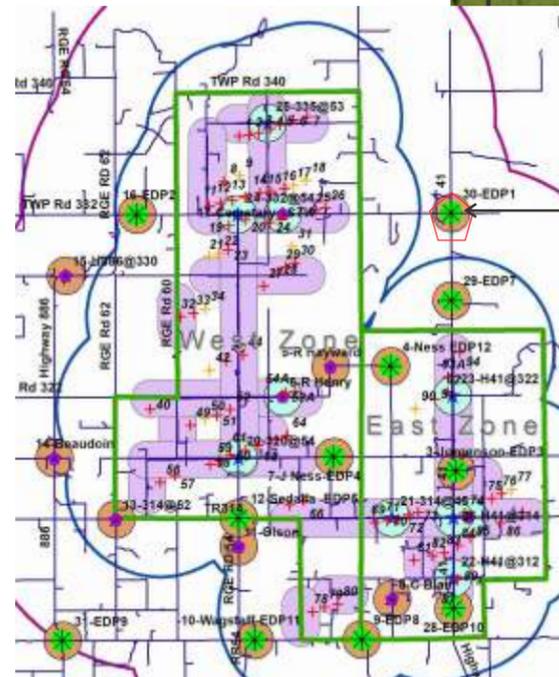


Single Frame 50mm lens = 40 deg. FOV

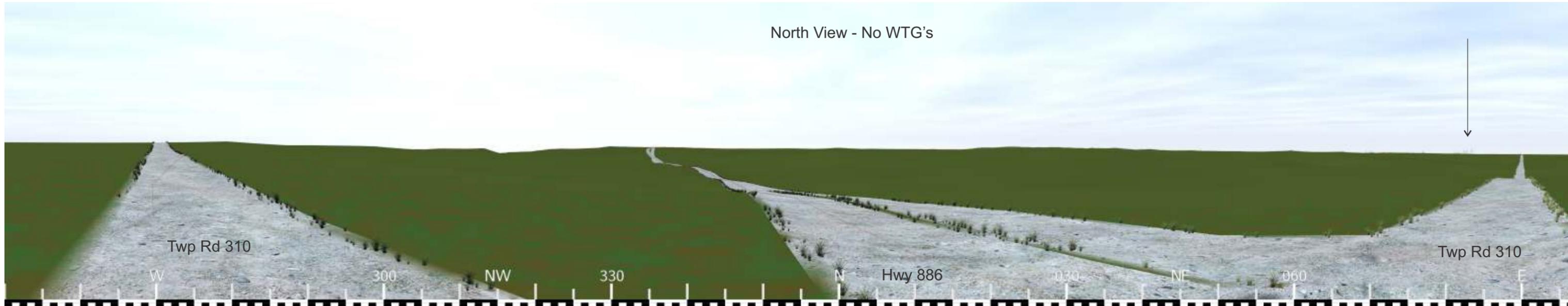
Viewpoint

30 - EDP1 - Hwy41@TWP Rd 332

W



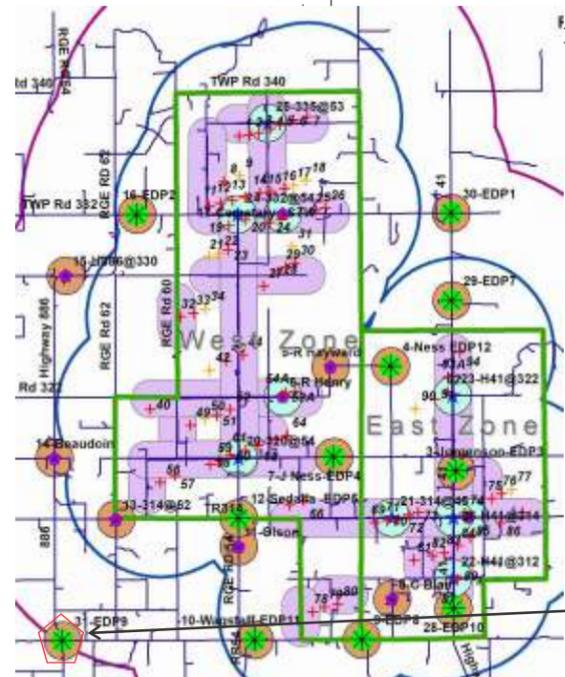
North View - No WTG's



road surfaces vary from rendering - to be ignored



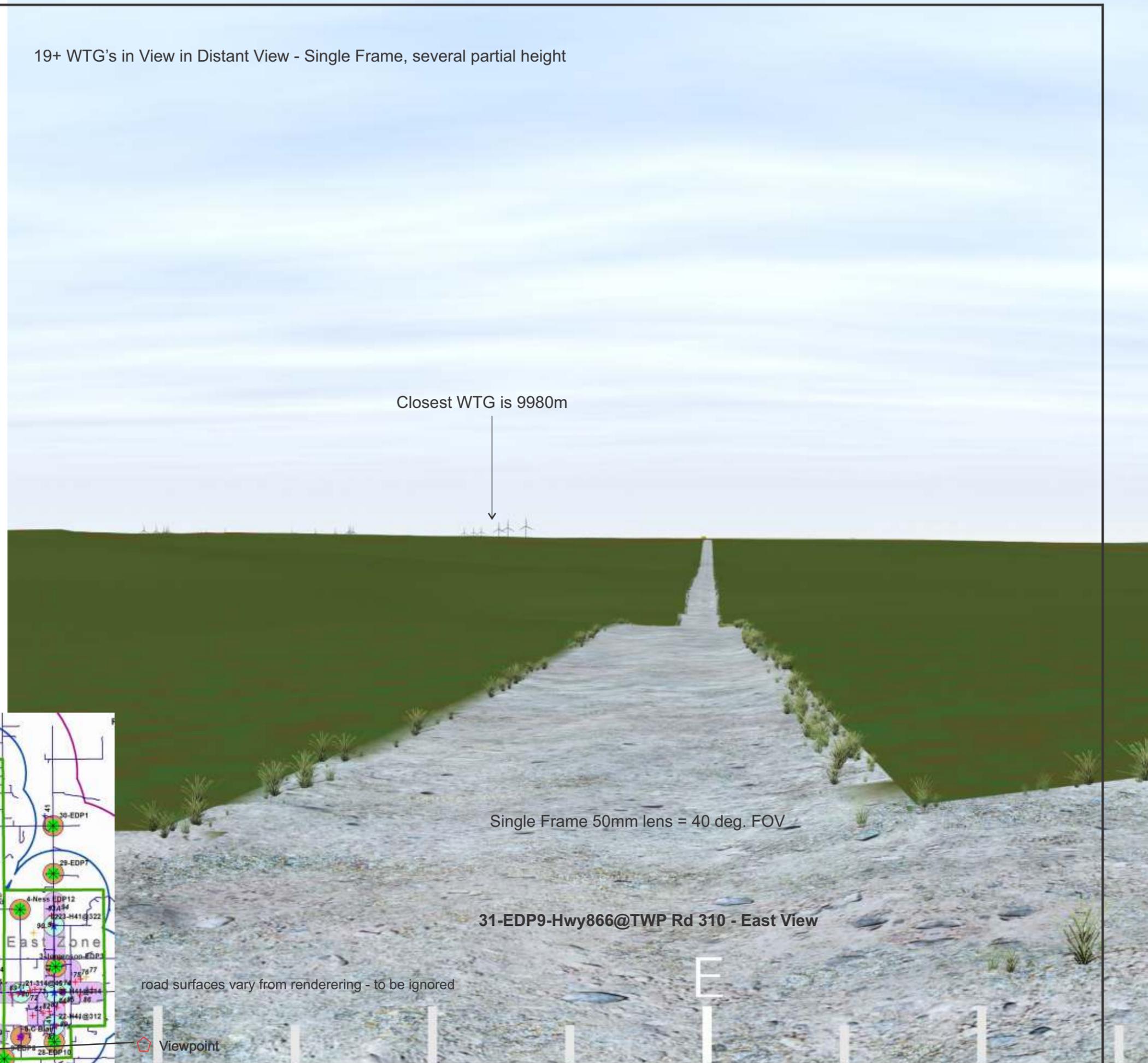
90°
180° Width of View



Closest WTG is 9980m

31-EDP9-Hwy886@TWP Rd 310

19+ WTG's in View in Distant View - Single Frame, several partial height



Closest WTG is 9980m

Single Frame 50mm lens = 40 deg. FOV

31-EDP9-Hwy866@TWP Rd 310 - East View

road surfaces vary from rendering - to be ignored

Viewpoint

