

Appendix A
Turbine Dimensions - Gamesa G90

Marble River Wind Farm

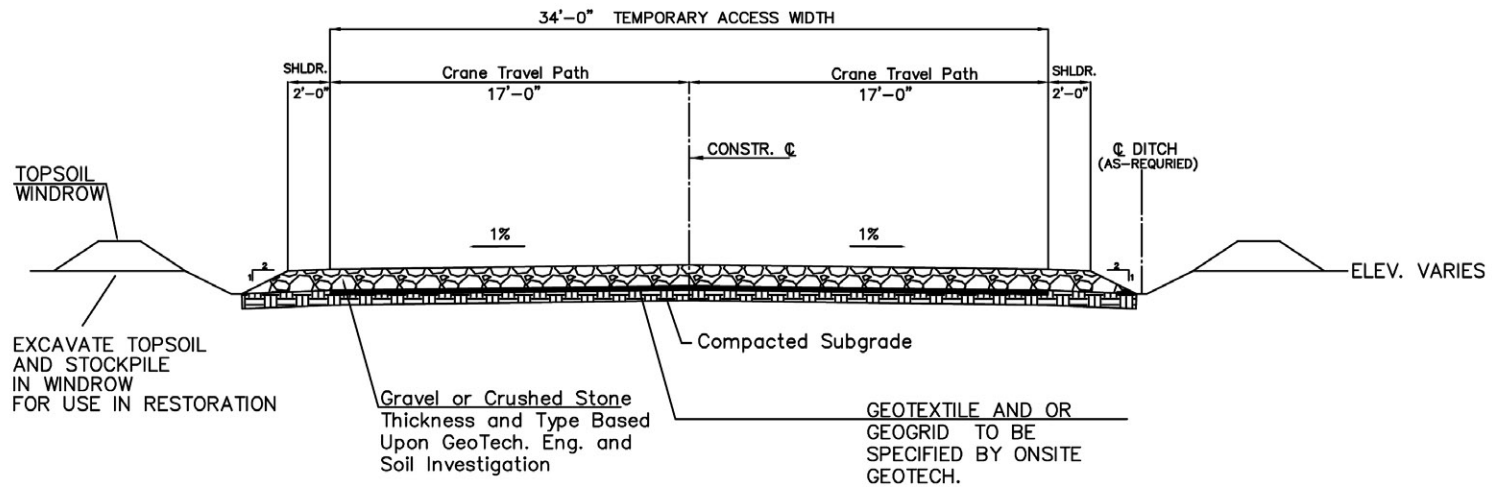
Towns of Clinton and Ellenburg
Clinton County, New York

Prepared By:

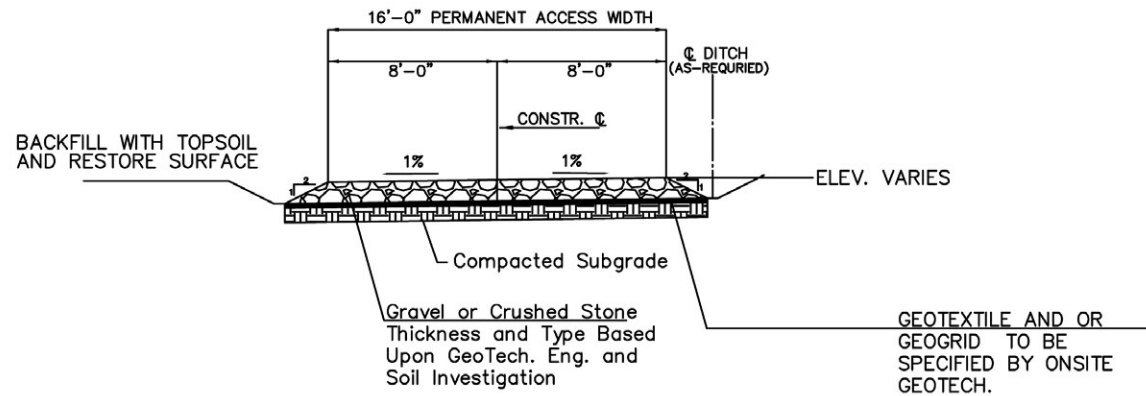


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TEMPORARY ACCESS ROAD



PERMANENT ACCESS ROAD



Source: Horizon Wind Energy

Appendix A Typical Access Road Construction

Marble River Wind Farm

Towns of Clinton and Ellenburg
Clinton County, New York

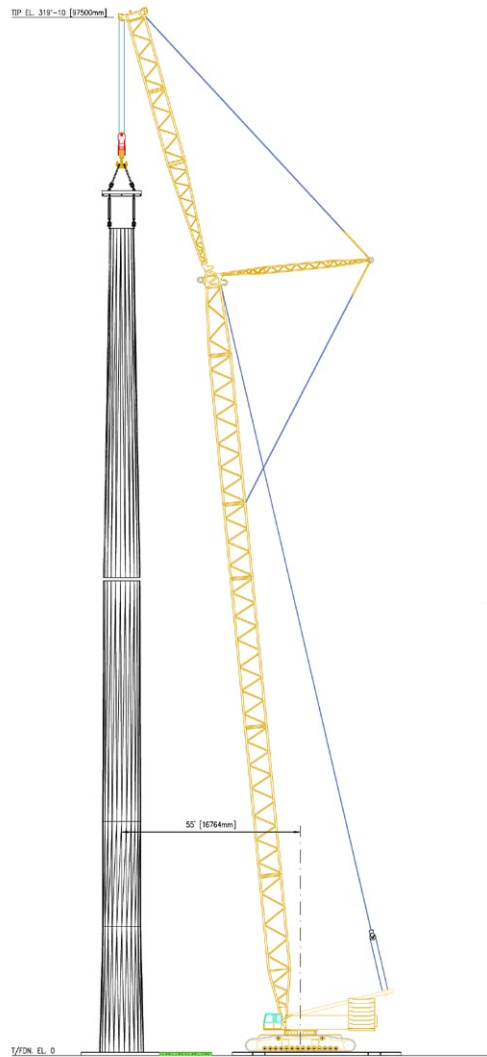
Prepared By:

EDR_{inc}

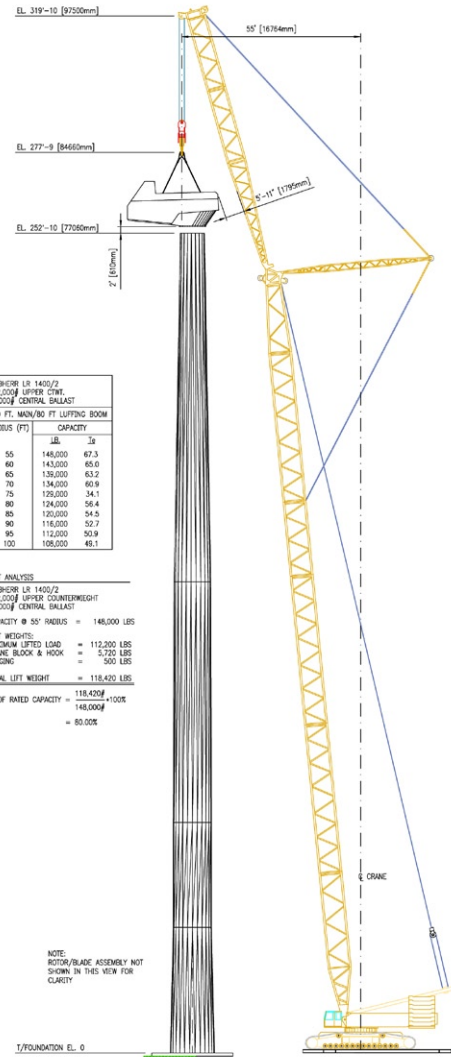
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Marble River
Wind Farm

March 2006



ELEVATION - SETTING UPPER TOWER SECTIONS
SCALE: NTS



LIEBHERR LR 1400/2
342,000# UPPER CRAWL
95,000# CENTRAL BALLAST
230 FT. MAIN/80 FT. LIFTING BOOM

RADIUS (FT)	LB	KG
55	148,000	67.3
60	143,000	65.0
65	139,000	63.2
70	134,000	60.9
75	129,000	58.5
80	124,000	56.4
85	120,000	54.5
90	116,000	52.7
95	112,000	50.9
100	108,000	49.1

LIFT ANALYSIS
LIEBHERR LR 1400/2
342,000# UPPER COUNTERWEIGHT
95,000# CENTRAL BALLAST

CAPACITY @ 55' RADIUS = 148,000 LBS

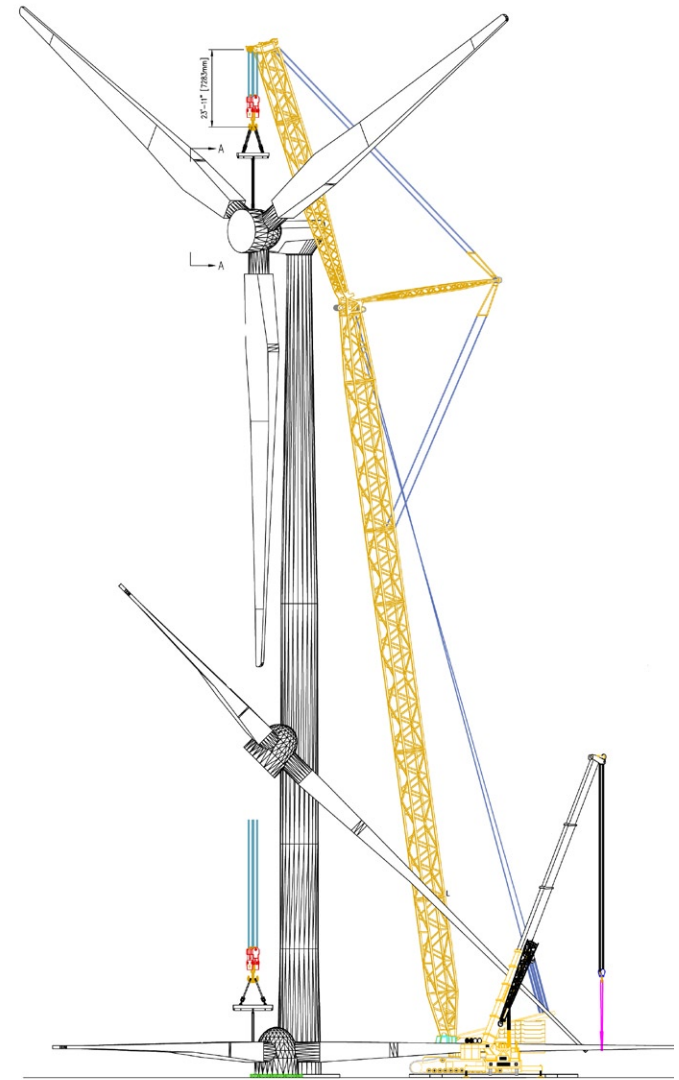
LIFT WEIGHTS:
MAXIMUM LIFTED LOAD = 112,200 LBS
CRANE BLOCK & HOOK = 5,720 LBS
RIGGING = 300 LBS

TOTAL LIFT WEIGHT = 118,420 LBS

% OF RATED CAPACITY = $\frac{118,420}{148,000} \times 100\%$
= 80.00%

NOTE:
ROTOR/BLADE ASSEMBLY NOT
SHOWN IN THIS VIEW FOR
CLARITY

ELEVATION - SETTING OF NACELLE
SCALE: NTS



END VIEW - UPRIGHTING OF ROTOR/BLADE ASSY.
SCALE: NTS

Source:
FOUR WINDS, LLC
WATERTOWN, WISCONSIN

Appendix A Typical Wind Turbine Assembly

Marble River Wind Farm

Towns of Clinton and Ellenburg
Clinton County, New York

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EDR_{PC}

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Appendix A
Conceptual Sustation Layout

Marble River Wind Farm

Towns of Clinton and Ellenburg
Clinton County, New York

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