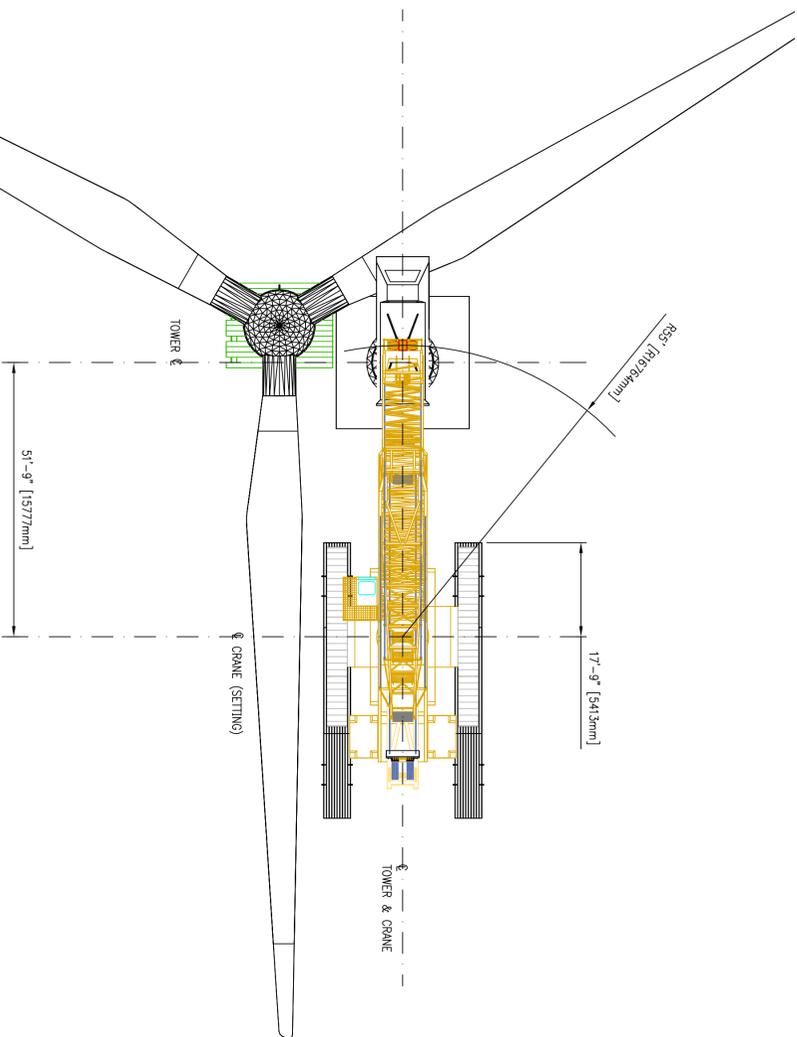


PLAN VIEW - INITIAL LIFT OF NACELLE

SCALE: 1/4"=1'-0"



PLAN VIEW - SETTING OF NACELLE

SCALE: 1/4"=1'-0"

LEIBHERR LR 1400/2 34200# UPPER COLUMN 95000# CENTRAL BALAST	276 FT. SL. MAIN/34 FT. P- JIB	RADIUS (FT)	LB	KG	CAPACITY
55	146,000	66.4	146,000	66.4	
60	140,000	63.6	140,000	63.6	
65	137,000	62.3	137,000	62.3	
70	131,000	59.5	131,000	59.5	
75	123,000	55.9	123,000	55.9	
80	113,000	51.4	113,000	51.4	
85	104,000	47.3	104,000	47.3	
90	97,000	44.1	97,000	44.1	
95	89,500	40.7	89,500	40.7	
100	83,000	37.7	83,000	37.7	

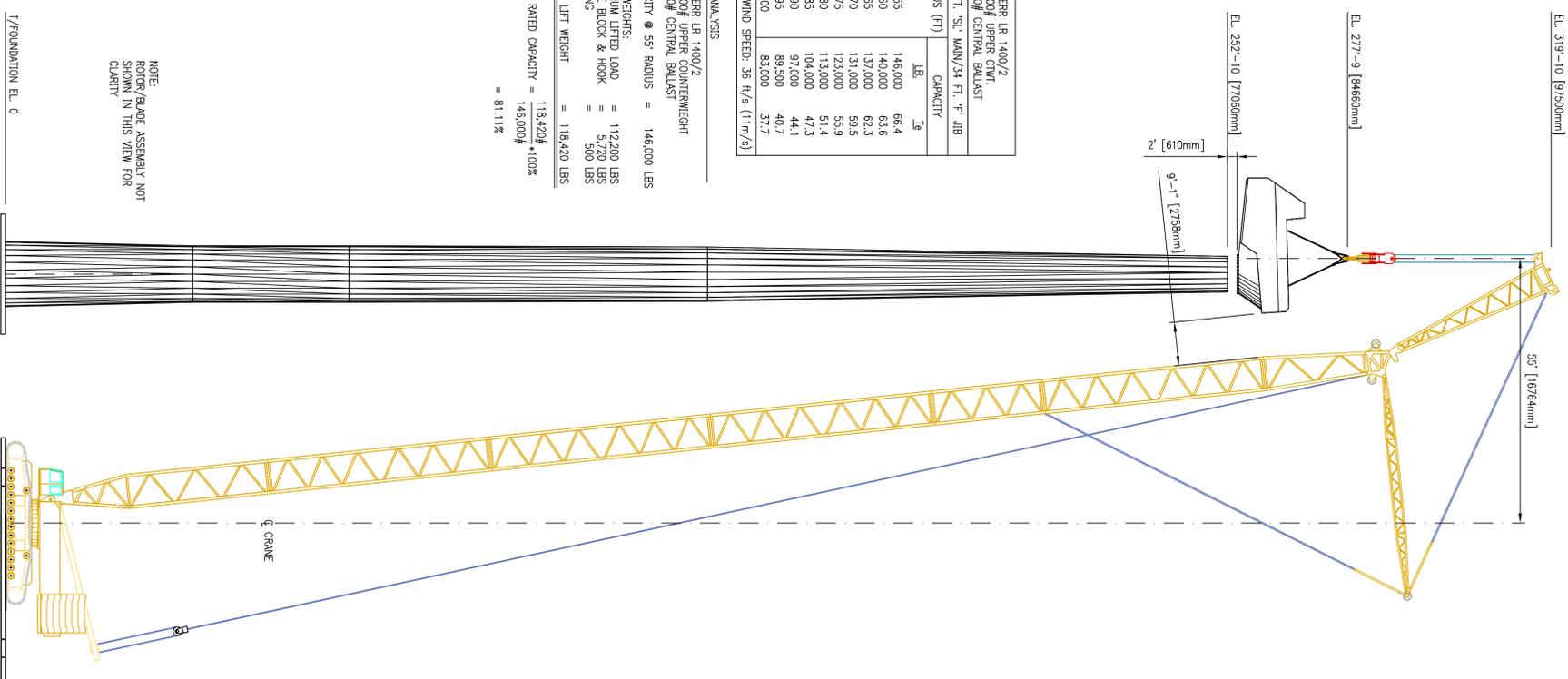
LIFT ANALYSIS

LEIBHERR LR 1400/2
34200# UPPER COLUMNWEIGHT
95000# CENTRAL BALAST
CAPACITY @ 55' RADIUS = 146,000 LBS

LIFT WEIGHTS:
MAXIMUM LIFTED LOAD = 112,200 LBS
CRANE BLOCK & HOOK = 5,720 LBS
RIGGING = 500 LBS
TOTAL LIFT WEIGHT = 118,420 LBS

% OF RATED CAPACITY = 118,420# / 146,000#
= 81.11%

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



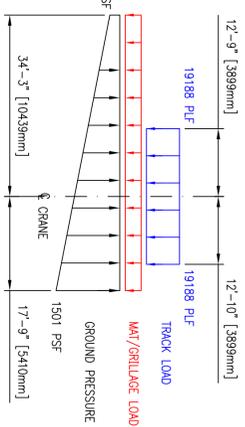
ELEVATION - SETTING OF NACELLE

SCALE: 1/16"=1'-0"

GROUND PRESSURE LOADINGS:
DURING THE SETTING OPERATIONS, IT IS PRESUMED THAT THE CRANE WILL BE SUPPORTED ON A COMBINATION OF TIMBER MATS AND STEEL GRILLAGES UNDER THE CRANER TRACKS (OR SUPPORTS). THE LOADS THAT THE CRANE TRACKS IMPART TO THE STEEL GRILLAGE WERE DETERMINED USING LOGCON SOFTWARE DEVELOPED BY LEIBHERR FOR USE WITH THEIR CRANES. THE VALUES FOR GROUND PRESSURE WERE USED IN DETERMINING GROUND PRESSURES UNDER THE TRACKS WHILE THE CRANE IS WORKING ON SITE.

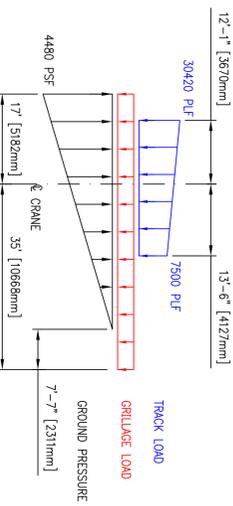
LOAD CASE 1: INITIAL LIFT OF NACELLE

LIFT WEIGHTS:
MAXIMUM LIFTED LOAD = 121,254 LBS
CRANE BLOCK & HOOK = 5,720 LBS
RIGGING = 500 LBS
TOTAL LIFT WEIGHT = 127,574 LBS



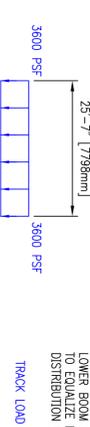
LOAD CASE 2: UPRIGHTING ROTOR OVER FRONT CORNER

LIFT WEIGHTS:
MAXIMUM LIFTED LOAD = 95,280 LBS
CRANE BLOCK & HOOK = 5,720 LBS
RIGGING = 500 LBS
TOTAL LIFT WEIGHT = 101,500 LBS



LOAD CASE 3: CRANE SUPPORTED ON GROUND ONLY

LIFT WEIGHTS:
MAXIMUM LIFTED LOAD = 0 LBS
CRANE BLOCK & HOOK = 5,720 LBS
RIGGING = 0 LBS
TOTAL LIFT WEIGHT = 5,720 LBS



NOTE:
INFORMATION DERIVED HEREON IS FOR ILLUSTRATIVE PURPOSES ONLY AND IS INTENDED TO CORRELATE THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS, CONSISTENT WITH THE CONDITIONS OF THE CONTRACT. IT IS NOT TO BE USED FOR THE DESIGN OF ANY STRUCTURE OR COMPONENTS THEREOF OR FOR THE DESIGN OF ANY OTHER PARTS OR TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT DIRECT WRITTEN PERMISSION FROM FOUR WINDS, LLC. THIS DRAWING IS ISSUED IN CONFERENCE, AND MAY NOT BE REPRODUCED, DISCLOSED TO THIRD PARTIES OR USED TO MANUFACTURE ANYTHING SHOWN HEREON WITHOUT DIRECT WRITTEN PERMISSION FROM FOUR WINDS, LLC.

REVISION DESCRIPTION	ID	DATE
Wind Turbine Erection Details Setting of Nacelle Using Liebherr LR1400/2	JTC	

DATE: 1/08/04
SCALE: As Noted
DRAWN BY: JTC
CHECKED BY: JTC

DESIGNED BY: JTC
PROJECT: Four Winds Project
CLIENT: WATERBURY WISCONSIN
DRAWING NUMBER: BWP-02