

## CASE STUDY

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## Wind Turbine Distribution Center

### Company Profile

Wind turbine manufacturer with 30 years of experience in designing, manufacturing and operating wind turbines, delivering more than 18 GW of sustainable energy worldwide.

### Business Challenge

Customer was looking for a wind turbine distribution center (Laydown Yard) in state of Nebraska. The site had to be within 100 mile radius of the wind farm and have rail and easy road access to the highway and with a minimum of 12.5 ac. area to store tower sections and machine heads before delivering them to the wind farm.

### Solution

BNSF Logistics found an agricultural land in Nebraska, 22 miles from the wind farm, with more than 10,000 ft. of railroad tracks. The proposed distribution center fulfilled all the requirements set forth by the customer. The task ahead for BNSF Logistics was to develop the site by improving the ground conditions to support a 250 ton crawler crane loaded with a 245,000 lbs. machine head for a combined ground bearing pressure of 65 psi. Furthermore, the access road to the site had to be improved to facilitate the truck delivery of the tower sections and machine heads to the wind farm.

### Process/Procedure

- Surveyed the property using drone technology and analyzed the survey results using Virtual Surveyor and Civil 3D software to design and develop the site.
- Coordinated with City/County /State officials for site development and county road improvement permits.
- A civil design of the site was created.
- Construction of the laydown site and access road with an aggregate surface.
- Surveyed and designed the access road improvements to connect to the highway.

### Benefits Achieved

- The project was completed on time and within budget.
- On time delivery of 300 tower sections and 100 machine heads to the wind farm
- A reliable and ideal laydown site was created for this project and future projects.

