



Egloff House

HISTORICAL STRUCTURAL MOVE

Project Description:

The historical Egloff House move project began in 2013 and was completed in 2015. The structural moves took place in Mason City, Iowa. The project involved moving four homes and three garage sections from a flooded area. The 12 block route traversed through a residential area and over the 100 year old North Carolina Bridge. Due to the weight (over 400,000 lbs) of the Egloff House, a temporary bridge was designed and manufactured by HMR Supplies to displace the house weight to the center bridge and off the bridge ends.

Temporary Bridge:

The bridge was constructed of four steel platforms that were connected by a bolster at bridge center. The finished bridge length was 136 feet, the width 29 feet and the weight was just over 260,000 lbs. Over 1100 heavy hex bolts were used to construct the four steel platform bridge sections. The bridge sections were transported by truck to the North Carolina Bridge. With assistance from a crane and a custom built hoist, the steel sections were lifted and placed into exact positions. On site assembly of the bridge took four days.

The Structural Move:

Due to the size and weight, the house was split into two sections prior to the move. The house section was fitted with 10 Holland Dollies. Two power dollies were positioned in the front and back of the structure. These dollies propelled and steered the home while the other 6 dollies were coaster dollies. Stationed next to the power dollies were two operators who were remotely controlling the propulsion and direction of the structure. The garage section used 8 coaster dollies and was pulled by truck. It took 45 minutes for the Egloff House to cross the bridge with less than 2.5 inches of temporary bridge deflection as calculated by the engineer.

The North Carolina Bridge:

The North Carolina Bridge was built in 1914 in Mason City and was posted to the National Register of Historic Places in June of 1998.

The Egloff Home:

The Egloff House was built in 1938. It is considered an outstanding example of the International style of Architecture. The International Style is reflected in buildings built in the 1920's and 30's. Glass and steel, in combination with usually less visible reinforced concrete, are the characteristic materials of construction.



A collaborative project of the Holland Corporations:



Bridge design and build



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