

# Span By Span Erection Of Precast Segmental Bridges

## The Definitive Guide

Precast segmental bridges are a type of bridge that is constructed using prefabricated concrete segments that are assembled on site. This type of bridge is becoming increasingly popular due to its many advantages, including its speed of construction, its durability, and its cost-effectiveness.



## Span-by-Span Erection of Precast Segmental Bridges: Twin-Girder Overhead Self-Launching Gantries

by Baryon Tensor Posadas

★★★★★ 5 out of 5

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Span-by-span erection is a method of constructing precast segmental bridges in which the segments are erected one by one, starting from one end of the bridge and working towards the other. This method is typically used for bridges that are longer than 100 meters (328 feet).

There are a number of factors that must be considered when planning and designing a span-by-span erected precast segmental bridge. These factors

include the length of the bridge, the weight of the segments, the type of soil at the bridge site, and the presence of any obstacles such as rivers or roads.

The construction of a span-by-span erected precast segmental bridge typically involves the following steps:

1. **Planning and design:** The first step is to develop a detailed plan and design for the bridge. This plan must take into account all of the factors mentioned above.
2. **Fabrication of the segments:** The next step is to fabricate the precast concrete segments at a casting yard. The segments are typically made of high-strength concrete and are reinforced with steel.
3. **Transportation of the segments:** The segments are then transported to the bridge site using heavy-duty trucks.
4. **Erection of the segments:** The segments are erected one by one using a crane. The crane is typically mounted on a barge or on a temporary platform.
5. **Closure of the bridge:** Once all of the segments have been erected, the bridge is closed by placing a closure joint between the last two segments.

Span-by-span erected precast segmental bridges are a safe and efficient way to build bridges. This type of bridge is durable, cost-effective, and can be constructed quickly. If you are planning to build a bridge, consider using a span-by-span erected precast segmental bridge.

## **Benefits of Span-By-Span Erection**

There are many benefits to using span-by-span erection for precast segmental bridges. Some of these benefits include:

- **Speed of construction:** Span-by-span erection is a fast and efficient way to build bridges. This is because the segments are prefabricated at a casting yard and then transported to the bridge site for assembly.
- **Durability:** Precast segmental bridges are very durable. The segments are made of high-strength concrete and are reinforced with steel. This makes them resistant to weathering and other environmental factors.
- **Cost-effectiveness:** Span-by-span erected precast segmental bridges are a cost-effective way to build bridges. This is because the segments are prefabricated at a casting yard, which reduces the amount of labor required on site.
- **Flexibility:** Span-by-span erection can be used to build bridges of various lengths and shapes. This makes it a versatile option for a wide range of bridge projects.

## **Applications of Span-By-Span Erection**

Span-by-span erection is a versatile method that can be used to build bridges of various lengths and shapes. Some of the most common applications of span-by-span erection include:

- **Highway bridges:** Span-by-span erection is a popular method for constructing highway bridges. This is because it is a fast and efficient way to build bridges that are long and straight.

- **Railway bridges:** Span-by-span erection is also a good option for constructing railway bridges. This is because it allows for the construction of bridges with complex geometries.
- **Pedestrian bridges:** Span-by-span erection can be used to build pedestrian bridges that are both safe and attractive.

Span-by-span erection is a safe and efficient way to build precast segmental bridges. This type of bridge is durable, cost-effective, and can be constructed quickly. If you are planning to build a bridge, consider using a span-by-span erected precast segmental bridge.



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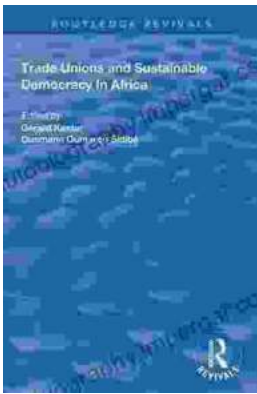
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