

## Nishi-Ohashi Bridge on Hiroshima Expressway 4



**Ordering Party** : Hiroshima Expressway Public Corporation  
**Location** : Nishi-ku, Hiroshima City  
**Bridge type** : Road bridge 7-span continuous cable stayed bridge  
**Bridge Length** : 476.5m  
**Width** : Effective width: 18.7m ( Standard area )  
 ~25.9m ( Widening area )  
**Span** : 40.0+88.0+4@78.0+35.0m  
**Services** : Execution design  
**Time of plan** : 2001

Nishi-Ohashi Bridge is a bridge across the Otagawa discharge channel on Hiroshima Expressway 4 that connects Hiroshima City urban area to Sanyo Expressway, and located on the west of the urban area.

7-span continuous cable stayed bridge that harmonizes with background mountains is a symbol of Hiroshima Expressway 4 and features this wide discharge channel.

The bridge with 4 single-plane suspension cables installed on each of 6 pylons suspends its main girder, and can be categorized as extradosed bridge in that tension members with a large eccentric load are used to increase tension of the main girder. To simplify erection, we designed the bridge to have a practical and reasonable structure through the following:

- (1) Self-weight of a girder includes only weigh of a girder
- (2) A cable prestress is used to reduce tension applied by dead weight that includes self-weight of the girder
- (3) For live load, behavior similar to one that a continuous girder shows is pursued