BRIDGES

Whenever a new road has to cross an existing drain or canal, a small bridge or culvert is constructed at the point of crossing .

Bridges classification

Bridges can be classified as :

- **According to function as : *Pedestrians ,Highway ,Railway* .**
- **According to material of construction as: *Timber, Masonary, Iron and Concrete.***
- **According to the form or type of superstructure as: *Slab, Beam Truss, Arch, Fram and Suspension bridge.***
- **According to span length as:**
  ***(Culvert)* which its length is less than 8m .**
  ***(Minor bridge)* which its length is 8-30m .**
  ***(Major bridge)* which its length is 30m .**
- **According to type of service and duration of use as : *Permanent Temporary ,Military* .**

Components of Bridge

Components of bridge can be divided into two groups :

- **Substructure**
- **Superstructure**

The substructure consist of : [foundation ,piers ,and abutment]
The Superstructure consist of : [main bridge ,bridge girders ,bridge floor and railing .

Pier: **it is a support of concrete or masonary , it is shaped to give smooth flow of wate to prevent eddy current and scour .**

Abutment: **it is a structure that support one end of a bridge and at the same time support the embankment upon bridge rests .**

Wing walls: **walls which regulate the entrance and exit of water into irrigation structures ,they may either be placed at right angle to the current or splayed out .**