

(सु. रविचंद्रन)
मंडल संरक्षा अधिकारी, पुणे

Central Railway

Office of the DRM
Safety Branch,
Pune
Date. 31.08. 2010

No. : PA/S/Safety Circular/38/2010-11.

**All Concerned
Pune Division**

Safety Circular No. 04 / 2010-11

Sub: - Different types of Bridges on Indian Railways.

A bridge is defined as structure spanning a river, road, valley, depression, or any other type of obstruction with a purpose to provide through passage / communication.

Classification of Bridges are as under :-

1. Important Bridge 2. Major Bridge 3. Minor Bridge 4. Culvert.

1.	Important bridge -	Important bridge is one which has a very large size of waterway of 110 sq. meter (1200 sq. ft.) and more or linear water way of 180 meters (600 ft) are classified as 'important bridge. As per the revised standard, now total area of waterway of more than 1000 sq. mtrs or linear waterway more than 300 meters.
2.	Major bridge -	Major bridge is one which has a total linear waterway of 18 meters (60 ft) or more of which has clear opening of 12 meters(40ft) or more.
3.	Minor bridge -	Bridge having linear water way of less than 12 meters (40ft) in case of single span bridge and less than 18 meters (60 ft) in case of multiple span.
4.	Culvert -	A very small bridge is called a ' culvert'. Normally a bridge having span of less than 6 meters may be called a culvert.

(**Source** - Indian Railway Track by Shri. M. M. Agarwal & Indian Railway

Classification of Bridges

Classification of structure	Description	Remark.
Earthenware pipe	--	--
Reinforced concrete pipe	--	--
Cast iron pipe	--	--
Rail opening	Clear opening with no girder of any kind between the abutments.	--
Timber top opening	Permanent Way carried on longitudinal timbers	Pathway for Keyman required for inspection
Timber top opening cross sleeper	Permanent Way on cross sleepers on longitudinal timbers.	Pathway for Keyman required for inspection
Slab top culvert	Stone slabs	--
RCC slab top culvert	Reinforced concrete slab with cushion of ballast.	--
PSC slab top culvert	Prestressed concrete slab with cushion of ballast.	--
RCC box culvert	Reinforced concrete box culvert	--
RCC T-beam bridge	Reinforced concrete T-beam and slab bridge	--
Arch bridge	Arch: open spandrel or spandrel filled.	--
RSJ girder bridge	Steel joists with or without flange plates and with cross sleepers carrying the permanent way.	Pathway for Keyman required for inspection
Deck plate girder	Single or duplicate girders with cross on top flanges.	Pathway for Keyman required for inspection
Half through plate girder bridge	Plate girders with track on cross girders and stringers or steel troughing or closely spaced cross beam.	Pathway for Keyman required for inspection
Deck triangulated girder	Triangulated girders with Permanent Way carried on top.	Pathway for Keyman required for inspection
Half through triangulated girders or pony girder	Triangulated girders with no over head bracing and with track carried on cross girders and stringers between bottom booms.	Pathway for Keyman required for inspection
Through triangulated girder	Triangulated girders with overhead bracing track carried on floor system between bottom booms.	Pathway for Keyman required for inspection
Composite girder bridge	Steel plate girders with RCC decking.	Pathway for Keyman required for inspection
PSC girder bridge	Prestressed concrete girder bridge	Pathway for Keyman required for inspection
Girder road over bridge	Iron or steel girder bridge over the line	Pathway for Keyman required for inspection
Arch road over bridge	Arch bridge over the line.	--
RCC / PSC road over bridge	Reinforced concrete / prestressed concrete bridge over the line	--
Foot over bridge	Iron, Steel or RCC foot over bridge over the line.	--