



# STATIC ANALYSIS OF CABLE STAYED BRIDGE SYSTEM USING VARIOUS TYPES OF DECK PROFILES

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## ABSTRACT

The Innovative deck profile of cable-stayed bridge proposed here for an analysis of different types of deck profiles by using cable stayed bridge system. The prime objective of the present work is to model an optimized Cable Stayed Bridge with economized girder with various features, i.e. span to depth ratio as constant parameter an attempt is made here to check the cost economy, structural strength of proposed by bridge by checking a ratio of load carrying capacity to material requirement respectively. The complete work consist an analysis using commercial software (MIDAS CIVIL 2016). Static analysis of bridge with variation in deck profiles, i.e., PSC-I Deck, PSC-T beam, PSC-Box girders. Parametric study will be work out using various tabular and graphical form which highlights an objective based on cost-economy aspect in terms of strength, serviceability and economy respectively are the prime criterion. Here a geometry was taken of "Pandit Dindayal Upadhyay Cable Stayed Bridge" which is presently constructing on Tapi river across Athwa to Adajan.

**KEY WORDS:** Cable-Stayed bridge, Single Pylon, PSC-box Deck, PSC-T Deck, PSC-I Deck Static Analysis, IRC Standard, Self Anchored Suspension type.