



Spannovation Bridge
& Seismic School

PRESENTS

Context-Sensitive Conceptual Bridge Design

WITH CONTRIBUTIONS FROM



ENGINEERS &
GEOSCIENTISTS
BRITISH COLUMBIA



Green Construction Research
& Training Center

**LEARN TO DESIGN INNOVATIVE AND
PRACTICAL BRIDGE SOLUTIONS!**

Presented by professional bridge engineers to advance your conceptual analysis and design skills, considering the influence of multi-disciplines and constructability. Over 30 hours of condensed instruction with 1000+ quiz questions. Learn from the comfort of your home or from office.

***24/7 Access
Flexible Schedule
Discussion Boards
Online Community
24 PDH/CPDs***

Step-by-step training in crafting practical solutions for highway girder bridges:

- Understand Design Philosophy & Limit States
- Learn Analysis & Design Techniques
- Prioritize Project & Multidiscipline Constraints
- Develop, Analyze and Design Feasible Options
- Estimate Cost, Evaluate and Rate Options
- Produce Bid/30% Design Deliverables

Avail Early-Bird Discounts!

LEARN MORE!

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COURSE CURRICULAM

General Introduction

Design Overview
Code Philosophy
Bridge Design Limit States
Sound Design Practices
Bridge Structural Systems
Bridge Components
Conceptual Design (A Primer)
Procurement Models

TEST A

Design, Multidiscipline & Constructability Considerations

Design Considerations
Critical Loads
Horizontal Alignment
Span Curvature
Vertical Alignment
Traffic and Utilities
Hydrotechnical
Geotechnical
Access, Shipping & Erection
Constructability - Precast Girders
Constructability - Steel Girders

TEST B

Conceptual Design Development

Design Criteria
Load Paths & Bridge Configurations
Loads: Service and Fatigue
Loads: Ultimate and Extreme
Analysis: Techniques
Analysis: Influence Lines
Analysis: Simplified Distribution
Analysis: Seismic
Analysis: Thermal, Braking & Wind
Sizing: Girders
Sizing: Bents and Footings
Sizing: Piles and Walls

TEST C

24/7 Access
Flexible Schedule
Discussion Boards
Online Community
24 PDH/CPDs

FINAL TEST

Test Answers & Explanations

Certification

PROJECT B (DESIGN-BUILD)

Objectives, Site-Constraints & Challenges
Optioneering: Genesis
Conceptual Design: 3 Options
Constructability Evaluation
Quantities Estimation
Finalize Winning Solution

PROJECT A (DESIGN-BID-BUILD)

Objectives, Site-Constraints & Challenges
Optioneering: Genesis & Shortlisting
Conceptual Design: 3 Options
Constructability Evaluation
Quantities & Cost Estimation
Options Evaluation
Review of Structural Design
Finalize Preferred Option

Professional Practice

Quality Management Guidelines

TEST E

Cost Estimating Methods
Approach to Conceptual Costing
Options Evaluation and Deliverables

TEST D