ALTERNATE #1: TYPICAL SINGLE BOX MODULE
(MIN. NO. INTERNAL WEB=2)
(MAX. SPAN=24m)

ALTERNATE #2: TYPICAL TWIN BOX MODULE
(MAX. SPAN=20m)

TYPICAL CROSS SECTION
(SKID PLATE NOT SHOWN FOR CLARITY)

ASSUME NOT TO SCALE
NOT FOR CONSTRUCTION
ALL STEEL PORTABLE STRUCTURE

1. DESIGN USAGE
1.1 All steel portable bridges, as shown in these conceptual standard drawings, are intended to be used only for temporary bridging applications, with minimal bridge deck grades, where braving and turning vehicle actions are not anticipated, and where traffic speeds are low. Other structure configurations are recommended for crossings that are required for longer time frame, have steep grades, or involve vehicle braking or turning action on the structure, and higher traffic speeds.

2. DEFINITIONS
2.1 Design Engineer: professional engineer registered in the province of British Columbia experienced in the design of steel portable bridges for industrial, commercial, or institutional applications.
2.2 Ministry Regional Engineer: professional engineer designated by the Ministry of Forests and Range.

3. GENERAL
3.1 Detailed structural engineering to be completed by design engineer. Documents concept review in accordance with APEGBC Bylaw 44B shall be obtained from the Ministry of Forests and Range prior to construction.
3.2 No truss or open web type structures will be accepted unless approved by Ministry Regional Engineer.
3.3 Side plates to be provided at bearing surfaces if required by contract specifications.

4. MATERIALS & FABRICATION
4.1 Steel fabrication: fabricator to be certified for Division 1 or 2 in accordance with CSA W59.
4.2 Steel: CSA G40.21M Grade 50T (CA13) (all plates)
4.3 Bolts: ASTM A325 Type 3
4.4 Welding: all welds to conform to CSA W59
   - Weld symbols shown indicate approved weld types. Weld size to be determined by design engineer.
   - Inspection of welding shall meet the requirements of CSA W59.
   - All butt welds on the flange, web, & deck shall be radiographic or ultrasonic tested in accordance with CSA W59.
   - The welding procedure data sheets, as per CSA W59, shall be available for review prior to fabrication.
   - The desired objective for flanges to web welds is that they be made as continuous, uninterrupted, and uniform welds free of abnormalities that could result in stress concentrations.
   - Generally, web to flange welds shall be made continuously by machine (i.e., automatic welding using submerged arc welding, flux core arc welding, or metal.cored arc welding).
   - There may be instances where the Ministry will accept griders to web flange welds with stops and starts in the design of the weld material (e.g., at plate diaphragm locations on box girders), at certain ranges of girders locations with limited access, or on portions of unexpected power outages; however, consistent welds made by automatic or machine methods are required whenever it is reasonably physically possible (e.g., welds made on the outside of all steel portable box girders, and interior welds on all steel portable box girders except as previously indicated in this manual).
   - Where welds require repair, they may be repaired using a semi-automatic or manual process, but the repaired weld shall blend smoothly with the adjacent welds. Weld repair shall be undertaken in accordance with CSA W59.
4.5 Wearing Surface: Surface preparation (sandblast) to SSPC-SP 10 coating amelioration and equivalent oxide coating approved by Ministry Regional Engineer (CA13 grit sand to provide anti-skid wearing surface).
4.6 Guard Rails & Footings: Surface preparation and painting as per Ministry specification.
4.7 Railing Plate to be designated to allow bridge to be supported on full width DIP No. 2 timber sill (min. width 400 mm).

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Make as shown

Typical All Steel Portable Superstructure Conceptual General Arrangement Sheet 2 of 2

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Preliminary Bridge Drawing

Province of British Columbia

Ministry of Forests and Range

Resource Tunnels and Engineering Branch

INVENTORIES

STD-05-090-02

DIP No. 2 timer sill (min. width 400 mm)