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NEW ARCH FOOTBRIDGES

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Recently we have designed four pedestrian bridges which decks are suspended on steel arches of a butterfly arrangement. They are as follows:

1. the Minto Island Bridge, Salem, Oregon, USA, is formed by a tied arch structure of the total length of 154 m. The main span of length of 93.9 m has a deck assembled of precast segments.
2. The Bridge across the Elbe River, Czech Republic has precast concrete deck of the total length of 219 m suspended on a flat true arch of the span length of 102 m.
3. The Bridge across the Berounka River, Czech Republic – forms a self-anchored arch structure of the total length of 138 m. The stress ribbon deck is supported by two inclined arches of span length of 104.0 m.
4. The Bridge across the Nitra river, Slovakia forms a tied arch structure of the total length of 52.4 m. The steel-concrete composite deck is suspended on two inclined arches of span length of 48.4 m.

The paper will describe the structural arrangement, static and dynamic analyses and the technology of their construction.



(1)



(2)



(3)



(4)