Appendix B: Distribution of Live Loads per Lane for Moment in Exterior Longitudinal Beams

(AASHTO Table 4.6.2.2.2d-1)

Distribution of Live Loads per Lane for Moment in Exterior Longitudinal Beams				
Type of Superstructure	**Applicable Cross Section from Table 4.6.2.2.1-1**	**One Design Lane Loaded**	**Two or More Design Lanes Loaded**	**Range of Applicability**
Wood Deck on Wood or Steel Beams	a, 1	Lever Rule	Lever Rule	N/A
Concrete Deck on Wood Beams	1	Lever Rule	Lever Rule	N/A
Concrete Deck, Filled Grid, Partially Filled Grid, or Unfilled Grid Deck Composite with Reinforced Concrete Slab on Steel or Concrete Beams; Concrete T-Beams, T- and Double T-Sections	a, e, k, and also i, j if sufficiently connected to act as a unit	Lever Rule	$g = e\, g_{interior}$ $e = 0.77 + \frac{d_e}{9.1}$	$-1.0 \le d_e \le 5.5$
			Use lesser of the values obtained from the equation above with $N_b = 3$ or the lever rule	$N_b = 3$
Cast-in-Place Concrete Multicell Box	d	$g = \frac{W_e}{14}$	$g = \frac{W_e}{14}$	$W_e \le S$
		or the provisions for a whole-width design specified in **Article 4.6.2.2.1**		
Concrete Deck on Concrete Spread Box Beams	b, c	Lever Rule	$g = e\, g_{interior}$ $e = 0.97 + \frac{d_e}{28.5}$	$0 \le d_e \le 4.5$ $6.0 < S \le 18.0$
			Use Lever Rule	$S > 18.0$

Concrete Box Beams Used in Multibeam Decks	f, g	$g = e\, g_{interior}$ $e = 1.125 + \frac{d_e}{30} \geq 1.0$	$g = e\, g_{interior}$ $e = 1.04 + \frac{d_e}{25} \geq 1.0$	$d_e \leq 2.0$
Concrete Beams Other than Box Beams Used in Multibeam Decks	h	Lever Rule	Lever Rule	N/A
	i, j if connected only enough to prevent relative vertical displacement at the interface			
Open Steel Grid Deck on Steel Beams	a	Lever Rule	Lever Rule	N/A
Concrete Deck on Multiple Steel Box Girders	b, c	As specified in **Table 4.6.2.2.2b-1**		
Source: **AASHTO Table 4.6.2.2.2d-1.**				