

FLOOR BEAMS LOAD ANALYSIS



PROJECT NAME: TELKWA 62.2
 BULKLEY RIVER CROSSING, WIDENING OF 24.0m SPAN, TPG BRIDGE
 TASK: 6. SUPERSTRUCTURE ANALYSIS AND DESIGN
 SUBTASK: 6.8. FLOOR BEAMS LOAD ANALYSIS

JOB NUMBER: CNRAIL0802
 DESIGNED: CHECKED
 DGT
 DATE: 5-Aug-08
 DATE:

DISTRIBUTION OF LOADS FROM THE DECK

$$P = \frac{(L \cdot S \cdot AD)}{S} = 1.15 \cdot 405 \cdot 735 / 1524 = 224.6235236 \text{ KN}$$

$$P/2 = 112.3117618 \text{ KN}$$

REFERENCES:

FLOOR BEAM SPAN

DEAD LOAD
 Sifwght= 138kg/m= 1.35378 kN/m
 Deck Weight, 16mm 92.316 0.90561996 kN/m
 Diaphragms, 2-410x67 20.88166667 0.20484915 kN/m
 Walkway= 1*.735/6 0.1225 kN/m
Total Dead Load= 2.586749 kN/m

SUPERIMPOSED DEAD LOAD

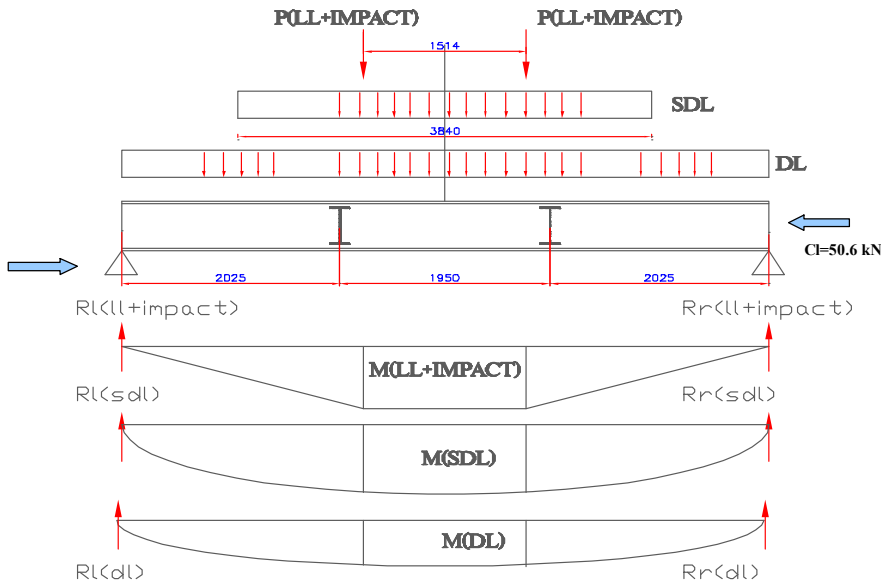
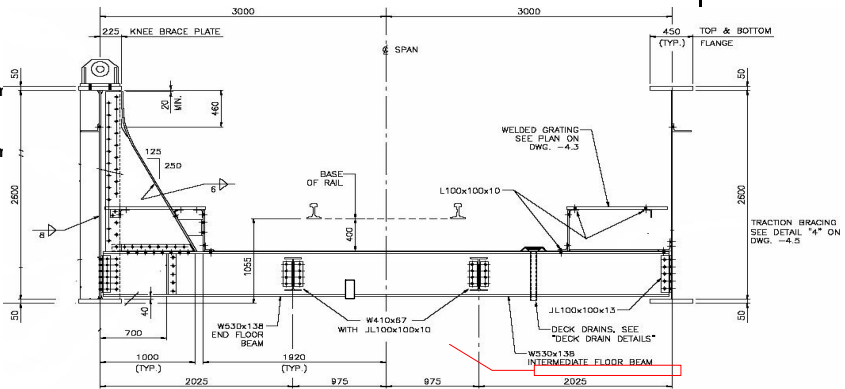
711mm ballast over 3.8m width **13.12506 kN/m**

LIVE LOAD

$P_{ll} = 112.3 \text{ KN}$
 $P_{ll+impact} = 40 - 3L = 1600$
 $P_{ll+impact} = 1600$
 $P_{ll+impact} = 157.1338173 \text{ KN}$
 $L_{span} = 6000$ 19.6850394 Feet
 $L_{str_str} = 1950$ 6.3976378 Feet

LONGITUDINAL LIVE LOAD

$C_{long} = 50.6 \text{ KN}$



R(dl)=	7.76024733 KN	M(dl)=	11.640371 KN-M
R(sdl)=	39.37518 KN	M(sdl)=	78.37629579 KN-M
R(ll+impa)	157.1338173 KN	M(ll+impact)=	352.3725852 KN-M
Total R	204.26924 KN	Total M	442.389252 KN-M

Longitudinal compression force 50.6 KN

(See Appendix 6.6 and A.6.6. For forces in floor beams due to traction)

§ 17.