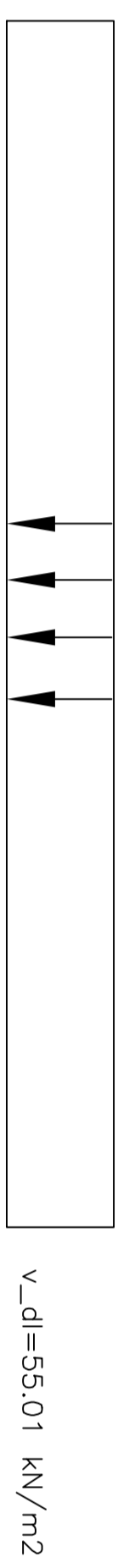
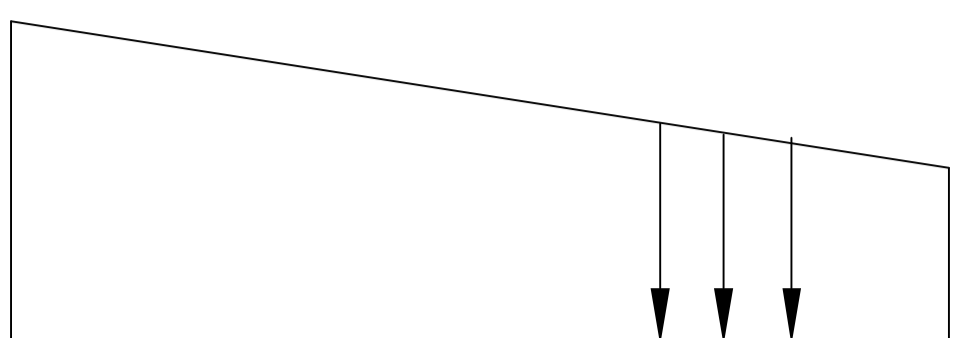


DESIGN LOAD DIAGRAMS

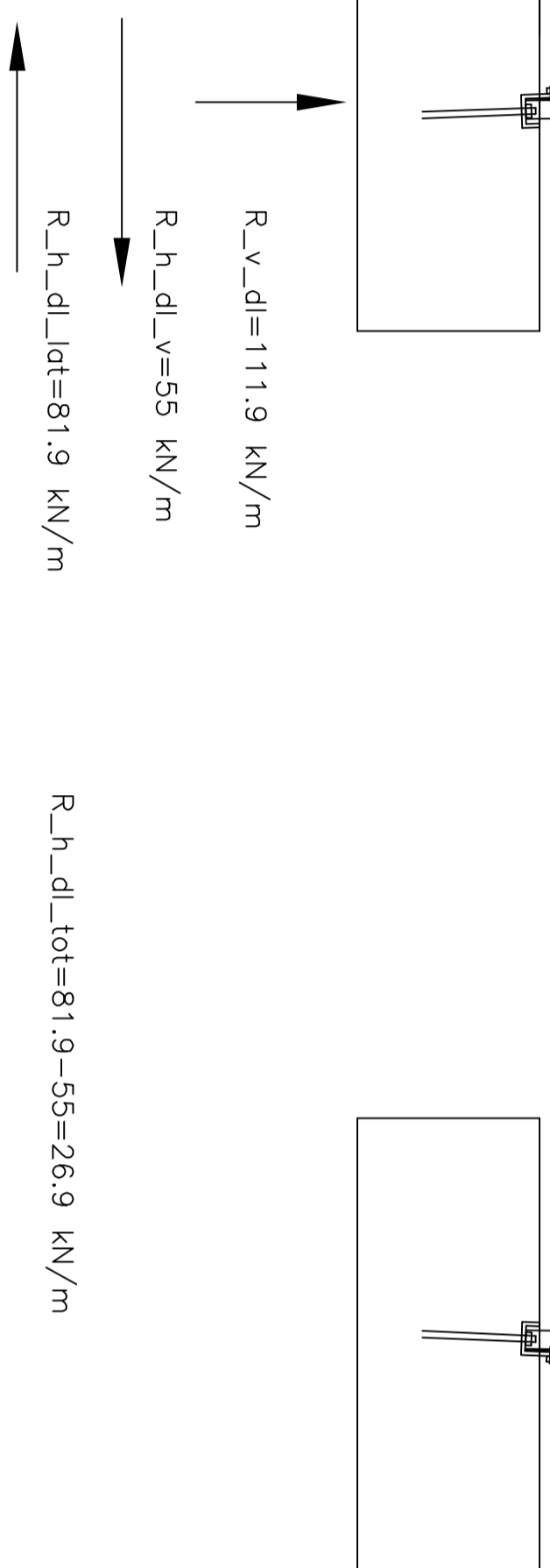
LOAD CASE: DEAD (SOIL+SELFWEIGHT)



$P_{h_top_dl} = 19.36 \text{ kN/m}^2$



$P_{h_bot_dl} = 46.17 \text{ kN/m}^2$

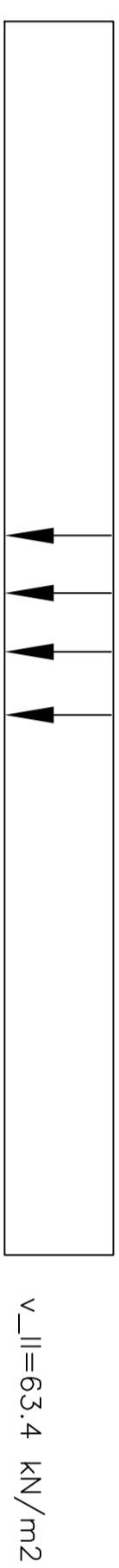


$R_{v_dl} = 111.9 \text{ kN/m}$

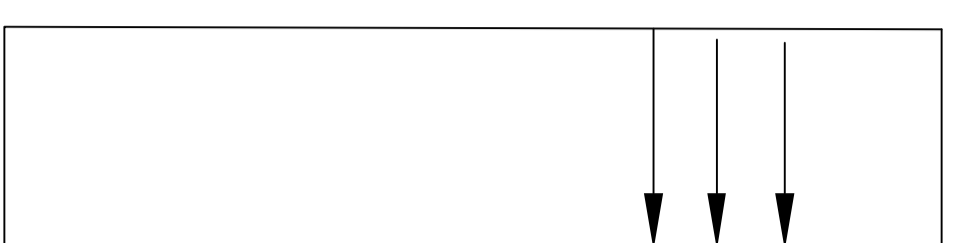
$R_{h_dl_v} = 55 \text{ kN/m}$

$R_{h_dl_tot} = 81.9 \text{ kN/m}$

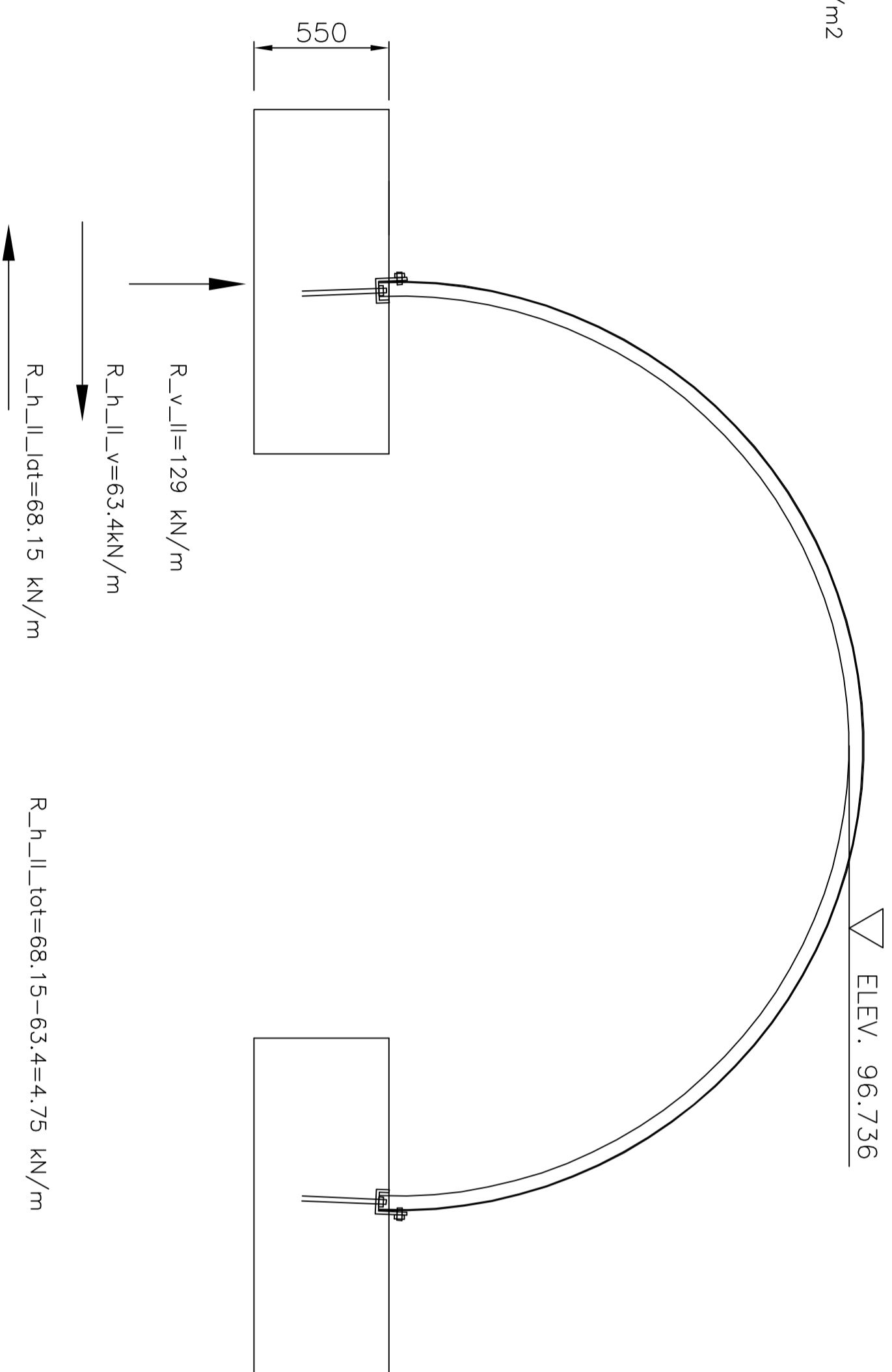
LOAD CASE: LIVE E-90 (INCL. IMPACT)



$v_{ll} = 63.4 \text{ kN/m}^2$



$P_{surch} = 27.26 \text{ kN/m}^2$

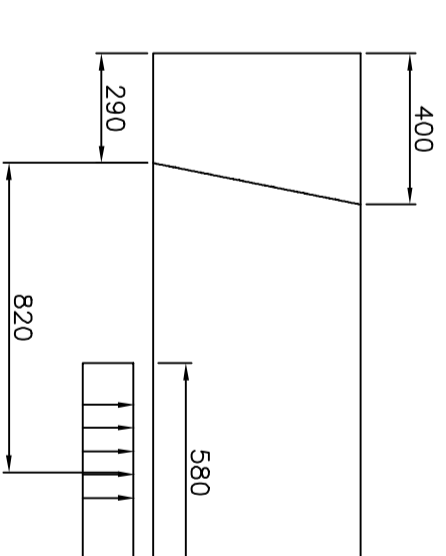


$R_{v_ll} = 129 \text{ kN/m}$

$R_{h_ll_v} = 63.4 \text{ kN/m}$

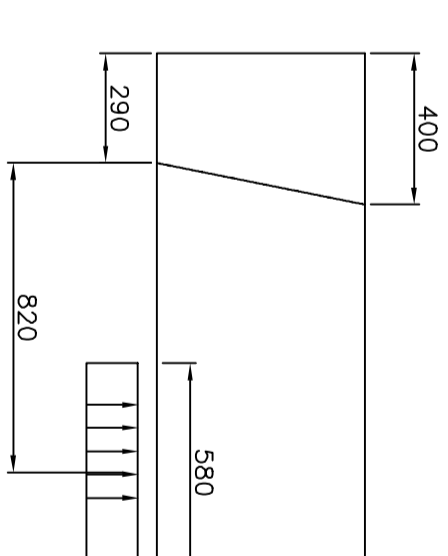
$R_{h_ll_tot} = 68.15 \text{ kN/m}$

$R_{h_dl_tot} = 26.9 \text{ kN/m}$



$R_{h_dl_tot} = 18.04 \text{ kN/m}$

$R_{h_dl_v} = 18.4 \text{ kN/m}$



$R_{h_ll_tot} = 4.75 \text{ kN/m}$

$R_{h_ll_v} = 3.3 \text{ kN/m}$

$R_{h_ll_tot} = 18.4 + 3.3 = 21.7 \text{ kN/m}$

SENIOR STRUCTURAL ENGINEER

No.	Date	Revision	By/For
C	MAY 16, 2011	GENERAL REVISION	
A	DEC 14, 2010	GENERAL REVISION	
	JAN 15, 2010	ISSUED FOR CONSTRUCTION	
	SEPT 18, 2009	ISSUED FOR TENDER	
Division		EASTERN CANADA	
Sub-division		KINGSTON	
Date			205.31

STONE ARCH CULVERT EXTENSION NEAR MOHAWK, ONTARIO CULVERT NORTH EXTENSION DETAILS DESIGN LOAD DIAGRAMS

Drawn	DGT	Designed	DGT	Checked	MS	Date
Design		Conception		Verification	NOTED	JAN 15, 2010

Office of Chief Engineer
Bureau de l'ingénieur en chef

