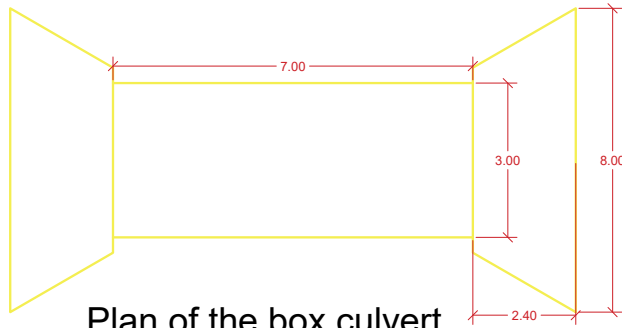
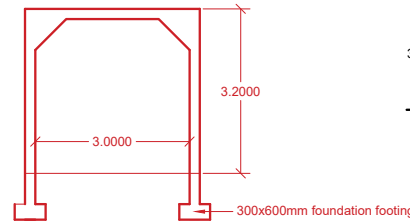


# ERIMBA river crossing in Kararuni- Karou road

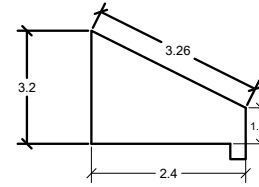
## Proposed small span box culvert



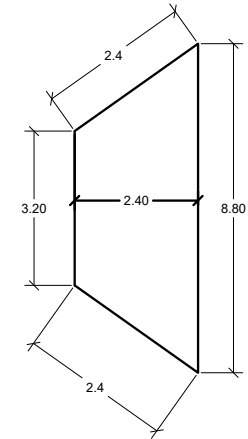
Plan of the box culvert



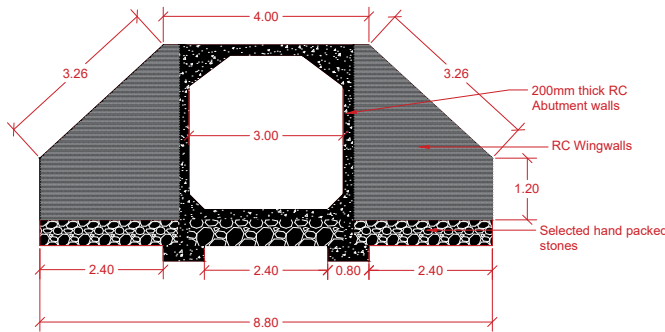
Section X-X  
Reinforcement details



Dimensions of Wingwalls



Details of RC Aprons



Front view

### EXCAVATION AND CONCRETE VOLUMES

ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE.					
	AREA	VOLUME	No.	TOTAL AREA	TOTAL VOLUME
APRONS	13.2	19.8	2	26.4	39.6
BED	21	31.5	1	21	31.5
TOTAL ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE.					71.1
ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE.					
APRONS	13.2	3.96	2	26.4	7.92
BED	21	6.3	1	21	6.3
WINGWALLS	5.28	1.584	4	21.12	7.416
ABUTMENT WALLS	22.4	6.72	2	44.8	13.44
Decking	22.4	6.72	1	22.4	6.72
Total Volume of concrete required for the structure					42

### REINFORCEMENT BARS

	Bar size	Unit length (m)	No. of bars	Total length (m)
WINGWALLS	D12	3.00	128	307
		2.2	136	300
APRONS	D12	5.5	68	374
		2.4	152	365
BED	D12	7.0	42	294
		3.4	94	320
ABUTMENT WALLS	D12	7	88	616
		3.2	188	602
Decking	D12	7	44	308
		3.2	94	300
Total length of steel required for the structure			0.889kg/m	3,786m
Total weight of steel required for the structure				3,365kg

### NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS STATED.
2. REINFORCEMENT TO BE AS PER THE BRITISH STANDARDS
3. HARDCORE TO BE OF GOOD SELECTED MATERIAL
4. REINFORCEMENT SHOULD BE PLACED 150MM C/C
5. EXCAVATION DEPTH WILL BE DETERMINED ON SITE.
6. PAYMENT OF THE WORKS WILL BE DONE BASED ON MEASURED WORKS.

CLIENT: KCEP-CRAL

DRAWN BY

ERIMBA RIVER CROSSING

FEBRUARY, 2019

MINISTRY OF AGRICULTURE,  
LIVESTOCK FISHERIES AND IRRIGATION

D. S TELIENY (P.Eng. Techn)

IN THARAKA NORTH SUB COUNTY

NKONDI

DRWG NO. 001/2019

PROPOSED SMALL SPAN BOX CULVERT

WAREHOUSE