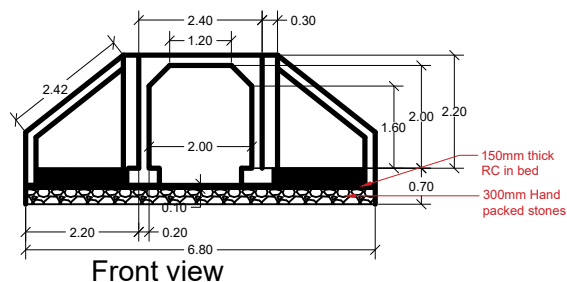
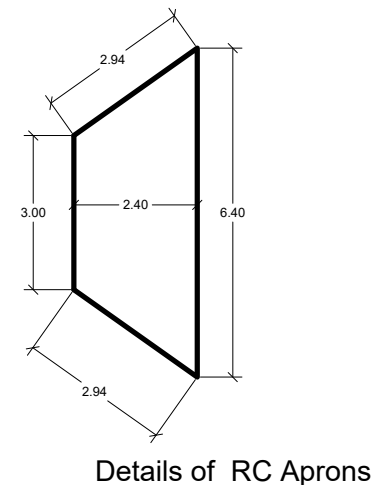
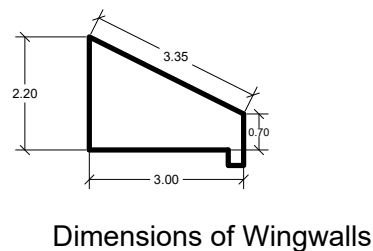
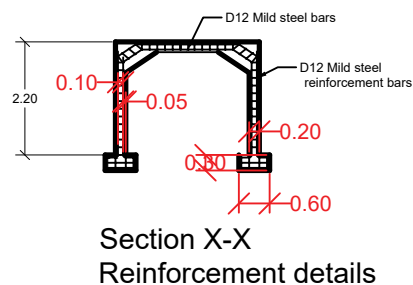
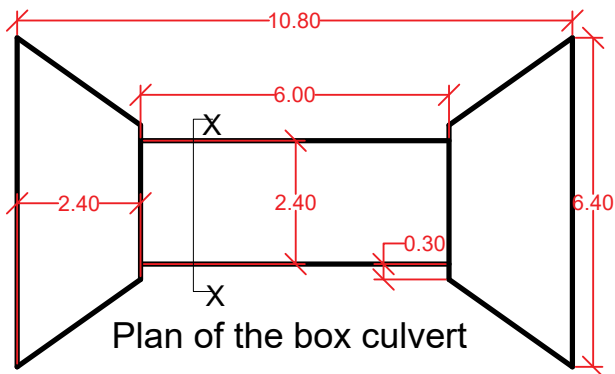


PROPOSED CONSTRUCTION OF A SMALL SPAN BOX CULVERT 5M x 2.4M x2M IN NJOKABI RIVER



	Bar size	Unit length (m)	No. of bars	Total length (m)
WINGWALLS	D12	3.0	72	264
		1.45	176	243.6
APRONS	D12	4.7	68	319.6
		2.4	128	307.2
BED	D12	6.0	34	204
		2.4	82	196.8
ABUTMENT WALLS	D12	6	64	384
		2.2	164	360.8
Decking	D12	6	34	204
		2.4	82	196.8
Total length of steel required for the structure			0.889kg/m	2,680.8
Total weight of steel required for the structure				2,383.2kg

ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE.					
	AREA	VOLUME	No.	TOTAL AREA	TOTAL VOLUME
APRONS	11.28	22.56	2	45.12	90.24
BED	3	6	6	18	36
TOTAL ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE.					126.24
ESTIMATED EXCAVATION VOLUMES FOR THE STRUCTURE.					
APRONS	11.28	2.933	2	22.56	5.866
BED	3	0.78	6	18	4.68
WINGWALLS	4.35	1.131	4	17.4	4.524
ABUTMENT WALLS	13.2	3.432	2	26.4	6.864
Decking	18	4.68	1	18	4.68
Total Volume of concrete required for the structure					26.614

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	NJOKABI BOX CULVERT IN	FEBRUARY 2019
MINISTRY OF AGRICULTURE, LIVESTOCK FISHERIES AND IRRIGATION	D. S TELIENY (P.Eng. Techn)	MBEERE NORTH SUB COUNTY	KARAMBARI
	DRWG NO. 002/2019	PROPOSED SMALL SPAN BOX CULVERT	WAREHOUSE