DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 30+000 **To:** 31+000

			(kilometres)	30 + 0				30 + 100				30 + 200				30 + 300				30 + 400				30 + 500				30 + 600				30 + 700				30 + 800				30 + 900				31 + 0
Chain-age			(metres)																																								
Road form.			Subgrade	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
			Cross section	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	E	E	E	E	A	A	A	A	A	A	A	A	E	E	E	E	E	E	E	E	E	E	E
Earth-works			Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
			Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
			Volume of ETL or Fill (m3/m)																																							
Gra-vel	Total		Thickness (cm,comp.)																																							
			Source (quarry No.)																																							
			Longitudinal gradient (in %)	-1				-1				-1				0				0				-1				0				0				-2				-2				
Mitre drains	Total		Number left =	1								1								1								1								1								
	10		Number right =					1								1								1								1								1				
Catch water	Total		Length of drain left =																																							
	0		Length of drain right =																																							
Culverts			Chainage (m) = New line																																							
	N																																									
	Ex		= Existing line																																							
	CD		= Cross drainage																																							
	AC/D		= Access culvert/ drift																																							
	L/R		= Left/ right																																							
	Length (m)		Ø 450mm																																							
			Ø 600mm																																							
			Ø 900mm																																							
	Ramp		Earth fill (m3)																																							
			H. Concrete (m3)																																							
Head-walls			Inlet (Material/Type)																																							
			Outlet (Material/Type)																																							
Scour Checks	HC		= Material this sheet/ Spacing left (m) =																																							
	0		Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																									

Chainage:	30+000						30+200						30+400						30+600						30+800						31+000
Input Measurements:	Aver. (m)	1 to 4 readings*)											**Free Clearance Width for Calculating areas**												Aver. (m)	1 to 4 readings					
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	
Grass Cutting						m						m						m						m						m	
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	
Tree and stump removal	0					m	0					m	0					m	0					m	0					m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																															
Cross Section Sketch	-						-						-						-						-						
Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)											**Height of Cut / Differences in Levels for calculating volumes**												Aver. (m)	1 to 4 readings*)					
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm	
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																														
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm	
Sloping						cm						cm						cm						cm						cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																															

Quantities:	Quantities								Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities								Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 31+000 **To:** 32+000

			(kilometres)	31 +				31 +				31 +				31 +				31 +				31 +				31 +				31 +				31 +				31 +				32 +
Chain-age			(metres)	0				100				200				300				400				500				600				700				800				900				0
Road form.			Subgrade	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
			Cross section	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Earth-works			Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
			Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
			Volume of ETL or Fill (m3/m)																																									
Gra-vel		Total	Thickness (cm,comp.)																																									
			Source (quarry No.)																																									
			Longitudinal gradient (in %)	-1				0				1				0				0				0				1				-1				0				-1				
Mitre drains		Total	Number left =	1								1								1								1								1								
		10	Number right =					1								1								1								1								1				
Catch water		Total	Length of drain left =																																									
		0	Length of drain right =																																									
Culverts			Chainage (m) = New line																																									
		N																																										
		Ex	= Existing line																																									
		CD	= Cross drainage																																									
		AC/D	= Access culvert/ drift																																									
		L/R	= Left/ right																																									
		Length (m)	Ø 450mm																																									
			Ø 600mm																																									
			Ø 900mm																																									
		Ramp	Earth fill (m3)																																									
			H. Concrete (m3)																																									
Head-walls			Inlet (Material/Type)																																									
			Outlet (Material/Type)																																									
Scour Checks		HC	= Material this sheet/ Spacing left (m) =																																									
		0	Spacing right (m) = =Total No. this sheet																																									
Additional Instruction as per Reference																																											

Chainage:	31+000	31+200	31+400	31+600	31+800	32+000
Input Measurements:	Aver. (m) / 1 to 4 readings*) — **Free Clearance Width for Calculating areas**				Aver. (m) / 1 to 4 readings	
Bush Clearing	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	
Grass Cutting	| m	| m	| m	| m	| m	
Grubbing	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	
Tree and stump removal	0 | m	0 | m	0 | m	0 | m	0 | m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						
Cross Section Sketch	-	-	-	-	-	
Measurements for small cut to fill:	Aver. (m) / 1 to 4 readings*) — **Height of Cut / Differences in Levels for calculating volumes**				Aver. (m) / 1 to 4 readings*)	
Height of cut < 0.25m	0 | 0 | cm	0 | cm	0 | 0 0 cm	0 | 0 0 cm	0 | 0 0 cm	
Height of cut > 0.25m	0 | 0 | cm	0 | cm	0 | 0 0 cm	0 | 0 0 cm	0 | 0 0 cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**					
Existing Roads	0 | cm	0 | cm	0 | cm	0 | cm	0 | cm	
Sloping	| cm	| cm	| cm	| cm	| cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						

Quantities:	Quantities									Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 32+000 **To:** 33+000

Chain-age	(kilometres)	32 + 0				32 + 100				32 + 200				32 + 300				32 + 400				32 + 500				32 + 600				32 + 700				32 + 800				32 + 900				33 + 0
	(metres)																																								
Road form.	Subgrade	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
	Cross section	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	E	E	E	E	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Earth-works	Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
	Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	Volume of ETL or Fill (m3/m)																																							
Gra-vel	Total Thickness (cm,comp.)																																							
	Source (quarry No.)																																							
Longitudinal gradient (in %)		-1				-2				0				-1				0				-2				-1				-2				-1				0			
Mitre drains	Total Number left =	1								1								1								1								1							
	10 Number right =					1								1								1								1								1			
Catch water	Total Length of drain left =																																							
	0 Length of drain right =																																							
Culverts	Chainage (m) = New line																																							
	N Ex = Existing line																																							
	CD = Cross drainage																																							
	AC/D = Access culvert/ drift																																							
	L/R = Left/ right																																							
	Length (m) Ø 450mm																																							
	Length (m) Ø 600mm																																							
	Length (m) Ø 900mm																																							
	Ramp Earth fill (m3)																																							
	Ramp H. Concrete (m3)																																							
Head-walls	Inlet (Material/Type)																																							
	Outlet (Material/Type)																																							
Scour Checks	HC = Material this sheet/ Spacing left (m) =																																							
	0 Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																								

Chainage:	32+000	32+200	32+400	32+600	32+800	33+000
Input Measurements:	**Free Clearance Width for Calculating areas**					
	Aver. (m) / 1 to 4 readings*)				Aver. (m) / 1 to 4 readings	
Bush Clearing	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	
Grass Cutting	/ m	/ m	/ m	/ m	/ m	
Grubbing	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	11 / 11 0 0 0 m	
Tree and stump removal	0 / m	0 / m	0 / m	0 / m	0 / m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						
Cross Section Sketch	-	-	-	-	-	
Measurements for small cut to fill:	**Height of Cut / Differences in Levels for calculating volumes**					
	Aver. (m) / 1 to 4 readings*)				Aver. (m) / 1 to 4 readings*)	
Height of cut < 0.25m	0 / 0 cm	0 / cm	0 / 0 cm	0 / 0 cm	0 / 0 cm	
Height of cut > 0.25m	0 / 0 cm	0 / cm	0 / 0 cm	0 / 0 cm	0 / 0 cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**					
Existing Roads	0 / cm	0 / cm	0 / cm	0 / cm	0 / cm	
Sloping	/ cm	/ cm	/ cm	/ cm	/ cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						

Quantities:	Quantities									Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 33+000 **To:** 34+000

			(kilometres)	33 +				33 +				33				33 +				33 +				33 +				33 +				33 +				33 +				33 +				34 +
			(metres)	0				100				200				300				400				500				600				700				800				900				0
Road form.			Subgrade	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
			Cross section	A	A	A	A	E	E	E	E	E	E	E	E	A	A	A	A	A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E
Earth-works			Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
			Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
			Volume of ETL or Fill (m3/m)																																								
Gra-vel		Total	Thickness (cm,comp.)																																								
			Source (quarry No.)																																								
			Longitudinal gradient (in %)	1				0				-1				0				-3				-6				-3				-1				1				0				
Mitre drains		Total	Number left =	1								1								1								1								1								
		10	Number right =					1								1								1								1								1				
Catch water		Total	Length of drain left =																																								
		0	Length of drain right =																																								
Culverts		N	Chainage (m) = New line																																								
		Ex	= Existing line																																								
		CD	= Cross drainage																																								
		AC/D	= Access culvert/ drift																																								
		L/R	= Left/ right																																								
	Length (m)		Ø 450mm																																								
			Ø 600mm																																								
			Ø 900mm																																								
	Ramp		Earth fill (m3)																																								
			H. Concrete (m3)																																								
Head-walls			Inlet (Material/Type)																																								
			Outlet (Material/Type)																																								
Scour Checks		HC	= Material this sheet/ Spacing left (m) =																																								
		0	Spacing right (m) = =Total No. this sheet																																								
Additional Instruction as per Reference																																										

Quantity Assessment GOTU-MERTI # # **County:** ISIOLO **From:** 33+000 **To:** 34+000 pg 15

Chainage:	33+000	33+200	33+400	33+600	33+800	34+000
Input Measurements:	Aver. (m) / 1 to 4 readings*) — **Free Clearance Width for Calculating areas**				Aver. (m) / 1 to 4 readings	
Bush Clearing	11 (11, 11, 0, 0, 0) m	11 (11, 0, 0, 0) m	11 (11, 0, 0, 0) m	11 (11, 0, 0, 0) m	11 (11, 0, 0, 0) m	
Grass Cutting	m	m	m	m	m	
Grubbing	11 (11, 0, 0, 0) m	11 (11, 0, 0, 0) m	11 (11, 0, 0, 0) m	11 (11, 0, 0, 0) m	11 (11, 0, 0, 0) m	
Tree and stump removal	0 m	0 m	0 m	0 m	0 m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						
Cross Section Sketch	-	-	-	-	-	
Measurements for small cut to fill:	Aver. (m) / 1 to 4 readings*) — **Height of Cut / Differences in Levels for calculating volumes**				Aver. (m) / 1 to 4 readings*)	
Height of cut < 0.25m	0 (0) cm	0 cm	0 (0, 0) cm	0 (0, 0) cm	0 (0, 0) cm	
Height of cut > 0.25m	0 (0) cm	0 cm	0 (0, 0) cm	0 (0, 0) cm	0 (0, 0) cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**					
Existing Roads	0 cm	0 cm	0 cm	0 cm	0 cm	
Sloping	cm	cm	cm	cm	cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						

Quantities:	Quantities									Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 34+000 **To:** 35+000

Chain-age		(kilometres)	34 +				34 +				34 +				34 +				34 +				34 +				34 +				34 +				34 +				35 +
		(metres)	0				100				200				300				400				500				600				700				800				900				0
Road form.		Subgrade	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
		Cross section	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	E	E	E	E	A	A	A	A	E	E	E	E	E	E	E	E	E	E	E
Earth-works		Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
		Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
		Volume of ETL or Fill (m3/m)																																							
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
		Longitudinal gradient (in %)	0				-2				-1				-1				-1				-2				-2				-1				0				0				
Mitre drains	Total	Number left =	1								1								1								1								1								
	10	Number right =					1								1								1								1								1				
Catch water	Total	Length of drain left =																																							
	0	Length of drain right =																																							
Culverts		Chainage (m)																																							
	N	= New line																																							
	Ex	= Existing line																																							
	CD	= Cross drainage																																							
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm																																							
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)																																							
Head-walls		Inlet (Material/Type)																																							
		Outlet (Material/Type)																																							
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																							
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																								

Chainage:	34+000						34+200						34+400						34+600						34+800						35+000
Input Measurements:	Aver. (m)	1 to 4 readings*)											**Free Clearance Width for Calculating areas**												Aver. (m)	1 to 4 readings					
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	
Grass Cutting						m						m						m						m						m	
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	
Tree and stump removal	1	1				m	0					m	0					m	0					m	0					m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																															
Cross Section Sketch	-						-						-						-						-						
Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)											**Height of Cut / Differences in Levels for calculating volumes**												Aver. (m)	1 to 4 readings*)					
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm	
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																														
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm	
Sloping						cm						cm						cm						cm						cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																															

Quantities:	Quantities									Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	1	No.	0	No.	0	No.	0	No.	0	**1**

	Quantities									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**0**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 35+000 **To:** 36+000

Chain-age		(kilometres)	35 +				35 +				35 +				35 +				35 +				35 +				35 +				35 +				35 +				36 +
		(metres)	0				100				200				300				400				500				600				700				800				900				0
Road form.		Subgrade	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
		Cross section	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	A	A	A	A	A	A	A	A	E	E	E	E	E	E	E	E	A	A	A	A	E	E	E	E	E
Earth-works		Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
		Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
		Volume of ETL or Fill (m3/m)																																							
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
		Longitudinal gradient (in %)	-2				-3				-2				-2				-2				-1				-1				-1				0				0				
Mitre drains	Total	Number left =	1								1								1								1								1								
	10	Number right =					1								1								1								1								1				
Catch water	Total	Length of drain left =																																							
	0	Length of drain right =																																							
Culverts		Chainage (m)																																							
	N	= New line																																							
	Ex	= Existing line																																							
	CD	= Cross drainage																																							
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm																																							
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)																																							
Head-walls		Inlet (Material/Type)																																							
		Outlet (Material/Type)																																							
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																							
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference				LG - latilitic Gravel																																					

Chainage:	35+000	35+200	35+400	35+600	35+800	36+000

Input Measurements: — **Free Clearance Width for Calculating areas**

	35+000 Aver. (m)	35+000 1 to 4 readings*)	35+200	35+400	35+600	35+800 Aver. (m)	35+800 1 to 4 readings
Bush Clearing	11	11 0 0 0	11 11 0 0 0	11 11 0 0 0	11 11 0 0 0	11	11 0 0 0
Grass Cutting							
Grubbing	11	11 0 0 0	11 11 0 0 0	11 11 0 0 0	11 11 0 0 0	11	11 0 0 0
Tree and stump removal	0		0	0	0	0	

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Cross Section Sketch - - - - -

Measurements for small cut to fill: — **Height of Cut / Differences in Levels for calculating volumes**

	35+000 Aver. (m)	35+000 1 to 4 readings*)	35+200	35+400	35+600	35+800 Aver. (m)	35+800 1 to 4 readings*)
Height of cut < 0.25m	0	0	0	0 0 0	0 0 0	0	0 0
Height of cut > 0.25m	0	0	0	0 0 0	0 0 0	0	0 0

For Reshaping : — **Difference in Level between Exist. Camber and Side Drain for calculating volumes**

	35+000	35+200	35+400	35+600	35+800
Existing Roads	0	0	0	0	0
Sloping					

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Quantities: — **Quantities**

	35+000	35+200	35+400	35+600	35+800	Total this page
Bush Clearing	400 m2	400 m2	400 m2	400 m2	400 m2	**2,000**
Grass Cutting	m2	m2	m2	m2	m2	
Grubbing	0 m2	0 m2	0 m2	0 m2	0 m2	**0**
Tree and stump removal	0 No.	0 No.	0 No.	0 No.	0 No.	**0**

Quantities

	35+000	35+200	35+400	35+600	35+800	Total this page
Height of cut < 0.25m	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	**0**
Height of cut > 0.25m	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	0 m3 (insitu)	**0**
Embankment/Fill	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	**0**
Drains full re-construction	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	242 m3 (insitu)	**1,208**
Reshaping by Labour	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	
By Towed Grader/Labour	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	
By Equipment Based Method	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	m3 (insitu)	

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Page: 2

Road Name: GOTU-MERTI **County** ISOLO **From:** 36+000 **To:** 37+000

Chain-age		(kilometres) (metres)	36 + 0				36 + 100				36 + 200				36 + 300				36 + 400				36 + 500				36 + 600				36 + 700				36 + 800				36 + 900				37 + 0
Road form.		Subgrade	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
		Cross section	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Earth-works		Method: RES, ETL or FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
		Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
		Volume of ETL or Fill (m3/m)																																							
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
		Longitudinal gradient (in %)	0				0				-1				1				-1				-2				-1				0				2				0				
Mitre drains	Total	Number left =	1								1								1								1								1								
	10	Number right =					1								1								1								1								1				
Catch water	Total	Length of drain left =																																							
	0	Length of drain right =																																							
Culverts	N Ex	Chainage (m) = New line = Existing line	36+010 N					36+150 N																																	
	CD	= Cross drainage	CD					CD																																	
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm	8					8																																	
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)	IV					IV																																	
Head-walls		Inlet (Material/Type)	I					I																																	
		Outlet (Material/Type)	I					I																																	
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																							
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																									

Quantity Assessment GOTU-MERTI # # **County:** ISIOLO **From:** 36+000 **To:** 37+000 **pg** 3

Chainage:	**36+000**						**36+200**						**36+400**						**36+600**						**36+800**						**37+000**
Input Measurements:	Aver. (m)	1 to 4 readings*)											**Free Clearance Width for Calculating areas**												Aver. (m)	1 to 4 readings				
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Grass Cutting						m						m						m						m						m
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Tree and stump removal	0					m	0					m	0					m	0					m	0					m
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																														
Cross Section Sketch	-						-						-						-						-					
Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)											**Height of Cut / Differences in Levels for calculating volumes**												Aver. (m)	1 to 4 readings*)				
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																													
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm
Sloping						cm						cm						cm						cm						cm
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																														

Quantities:	**Quantities**								**Total this page**
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities								**Total this page**
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m		m3 (insitu)		m3 (insitu)		m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill	1,134	m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		**1,134**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County:** ISIOLO **From:** 37+000 **To:** 38+000

Chain-age	(kilometres)		37 + 0				37 + 100				37 + 200				37 + 300				37 + 400				37 + 500				37 + 600				37 + 700				37 + 800				37 + 900				38 + 0
	(metres)																																								
Road form.	Subgrade		LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
	Cross section		A	A	A	A	E	E	E	E	E	E	E	E	E	E	E	E	A	A	A	A	E	E	E	E	A	A	A	A	E	E	E	E	A	A	A	A	A	A	A	A	A
Earth-works	Method: RES, ETL or FILL		RES	RES	RES	RES	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
	Choice of reshaping: L, T or E		E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	Volume of ETL or Fill (m3/m)																																								
Gra-vel	Total	Thickness (cm,comp.)																																							
		Source (quarry No.)																																							
Longitudinal gradient (in %)			-2				0				1				3				1				-5				-3				-2				-2				-1				
Mitre drains	Total	Number left =	1								1								1								1								1								
	10	Number right =					1								1								1								1								1				
Catch water	Total	Length of drain left =																																							
	0	Length of drain right =																																							
Culverts	N Ex	Chainage (m) = New line = Existing line							37+160 N						37+250 N																											
	CD	= Cross drainage							CD						CD																											
	AC/D	= Access culvert/ drift																																							
	L/R	= Left/ right																																							
	Length (m)	Ø 450mm																																							
		Ø 600mm																																							
		Ø 900mm							8						8																											
	Ramp	Earth fill (m3)																																							
		H. Concrete (m3)							IV						IV																											
Head-walls	Inlet (Material/Type)								I						I																											
	Outlet (Material/Type)								I						I																											
Scour Checks	HC	= Material this sheet/ Spacing left (m) =																																							
	0	Spacing right (m) = =Total No. this sheet																																							
Additional Instruction as per Reference																																								

Quantity Assessment	GOTU-MERTI	#	#	County: ISIOLO	From: 37+000	To: 38+000 pg	4

Chainage:	37+000	37+200	37+400	37+600	37+800	37+000

Free Clearance Width for Calculating areas

Input Measurements:	Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings					Aver. (m)	1 to 4 readings					Aver. (m)	1 to 4 readings				
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Grass Cutting						m						m						m						m						m
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m
Tree and stump removal	0					m						m	0					m	0					m	0					m

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Cross Section Sketch	-	-	-	-	-

Height of Cut / Differences in Levels for calculating volumes

Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)					Aver. (m)	1 to 4 readings					Aver. (m)	1 to 4 readings					Aver. (m)	1 to 4 readings*)				
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																							
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm
Sloping						cm						cm						cm						cm						cm

*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).

Quantities

Quantities:									Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

Quantities

									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill	567	m3 (insitu)	567	m3 (insitu)		m3 (insitu)		m3 (insitu)		**1,134**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Road Name: GOTU-MERTI **County** ISIOLO **From:** 38+000 **To:** 39+000

Chain-age		**(kilometres)** **(metres)**	38 + 0				38 + 100				38 + 200				38 + 300				38 + 400				38 + 500				38 + 600				38 + 700				38 + 800				38 + 900			39 + 0
Road form.		**Subgrade**	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
		Cross section	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Earth-works		**Method: RES, ETL or FILL**	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES
		Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
		Volume of ETL or Fill (m3/m)																																								
Gra-vel	**Total**	**Thickness (cm,comp.)**																																								
		Source (quarry No.)																																								
Longitudinal gradient (in %)			-2				-4				-5				-4				5				-1				-2				-2				1				-1			
Mitre drains	**Total**	**Number left =**	1								1								1								1								1							
	10	**Number right =**					1								1								1								1								1			
Catch water	**Total**	**Length of drain left =**																																								
	0	**Length of drain right =**																																								
Culverts	N Ex	**Chainage (m)** **= New line** **= Existing line**																	38+410 N																38+800 N							
	CD	**= Cross drainage**																	CD																CD							
	AC/D	**= Access culvert/ drift**																																								
	L/R	**= Left/ right**																																								
	Length (m)	**Ø 450mm**																																								
		Ø 600mm																																								
		Ø 900mm																	8																8							
	Ramp	**Earth fill (m3)**																																								
		H. Concrete (m3)																	IV																IV							
Head-walls		**Inlet (Material/Type)**																	I																I							
		Outlet (Material/Type)																	I																I							
Scour Checks	**HC**	**= Material this sheet/** **Spacing left (m) =**									20								20																							
	5	**Spacing right (m) =** **=Total No. this sheet**									20								20																							
Additional Instruction as per Reference																																										

Quantity Assessment GOTU-MERTI # # **County:** ISIOLO **From:** 38+000 **To:** 39+000 pg 5

Chainage:	23+000	23+200	23+400	23+600	23+800	24+000
Input Measurements:	Aver. (m) / 1 to 4 readings*) — **Free Clearance Width for Calculating areas**				Aver. (m) / 1 to 4 readings	
Bush Clearing	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	
Grass Cutting	m	m	m	m	m	
Grubbing	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	11 | 11 0 0 0 m	
Tree and stump removal	0 | m	0 | m	0 | m	0 | m	0 | m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						
Cross Section Sketch	-	-	-	-	-	
Measurements for small cut to fill:	Aver. (m) / 1 to 4 readings*) — **Height of Cut / Differences in Levels for calculating volumes**				Aver. (m) / 1 to 4 readings*)	
Height of cut < 0.25m	0 | 0 cm	0 | cm	0 | 0 0 cm	0 | 0 0 cm	0 | 0 0 cm	
Height of cut > 0.25m	0 | 0 cm	0 | cm	0 | 0 0 cm	0 | 0 0 cm	0 | 0 0 cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**					
Existing Roads	0 | cm	0 | cm	0 | cm	0 | cm	0 | cm	
Sloping	| cm	| cm	| cm	| cm	| cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).						

Quantities:	Quantities									Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities									Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……

DETAILED IMPROVEMENT PLAN

Page: 5

Road Name: GOTU-MERTI **County** ISOLO **From:** 39+000 **To:** 40+000

Chain-age		(kilometres)	39 +				39 +				39 +				39 +				39 +				39 +				39 +				39 +				39 +				39 +			40 +
		(metres)	0				100				200				300				400				500				600				700				800				900			0
Road form.		Subgrade	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG	LG
		Cross section	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Earth-works		Method: RES, ETL or FILL	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	RES	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL	FILL
		Choice of reshaping: L, T or E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
		Volume of ETL or Fill (m3/m)																																								
Gra-vel	Total	Thickness (cm,comp.)																																								
		Source (quarry No.)																																								
Longitudinal gradient (in %)			-1				-3				-2				-5				-5				-4				-4				-1				-1				-1			
Mitre drains	Total	Number left =	1								1								1								1															
	7	Number right =					1								1								1																			
Catch water	Total	Length of drain left =																									100															
	100	Length of drain right =																																								
Culverts	N Ex	Chainage (m) = New line = Existing line																									39+600 N								39+800 N							
	CD	= Cross drainage																									CD								CD							
	AC/D	= Access culvert/ drift																																								
	L/R	= Left/ right																																								
	Length (m)	Ø 450mm																																								
		Ø 600mm																																								
		Ø 900mm																									10								8							
	Ramp	Earth fill (m3)																																								
		H. Concrete (m3)																									IV								IV							
Head-walls		Inlet (Material/Type)																									I								I							
		Outlet (Material/Type)																									I								I							
Scour Checks	HC	= Material this sheet/ Spacing left (m) =													20				20																							
	5	Spacing right (m) = =Total No. this sheet													20				20																							
Additional Instruction as per Reference																																								

Chainage:	39+000						39+200						39+400						39+600						39+800						40+000
Input Measurements:	Aver. (m)	1 to 4 readings*)											**Free Clearance Width for Calculating areas**												Aver. (m)	1 to 4 readings				
Bush Clearing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	
Grass Cutting						m						m						m						m						m	
Grubbing	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	11	11	0	0	0	m	
Tree and stump removal	0					m	0					m	0					m	0					m	0					m	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																															
Cross Section Sketch	-						-						-						-						-						
Measurements for small cut to fill:	Aver. (m)	1 to 4 readings*)											**Height of Cut / Differences in Levels for calculating volumes**												Aver. (m)	1 to 4 readings*)				
Height of cut < 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm	
Height of cut > 0.25m	0	0				cm	0					cm	0		0		0	cm	0		0		0	cm	0		0		0	cm	
For Reshaping :	**Difference in Level between Exist. Camber and Side Drain for calculating volumes**																														
Existing Roads	0					cm	0					cm	0					cm	0					cm	0					cm	
Sloping						cm						cm						cm						cm						cm	
*) Note: The user is free to select the number of reading required according to the site conditions. (min. 1 max. 4 for each section).																															

Quantities:	Quantities								Total this page
Bush Clearing	400	m2	400	m2	400	m2	400	m2	400	**2,000**
Grass Cutting		m2		m2		m2		m2		
Grubbing	0	m2	0	m2	0	m2	0	m2	0	**0**
Tree and stump removal	0	No.	0	No.	0	No.	0	No.	0	**0**

	Quantities								Total this page
Height of cut < 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Height of cut > 0.25m	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	m3 (insitu)	0	**0**
Embankment/Fill		m3 (insitu)		m3 (insitu)	567	m3 (insitu)	1,134	m3 (insitu)	1,134	**2,835**
Drains full re-construction	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	m3 (insitu)	242	**1,208**
Reshaping by Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Towed Grader/Labour		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		
By Equipment Based Method		m3 (insitu)		m3 (insitu)		m3 (insitu)		m3 (insitu)		

Data Collected by: **Name:** …… **Date:** ……**Signature:** ……