

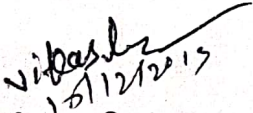
तकनीकी प्रतिवेदन

पथ का नाम:— रामपुर चौक पी0डब्लू0डी0 रोड से रामपुर ग्राम तक।

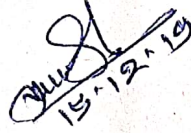
प्रस्तुत प्राक्कलन माननीय मुख्यमंत्री बिहार के सीतामढ़ी जिला अन्तर्गत रून्नीसैदपुर प्रखंड के रामपुर ग्राम आगमन के कार्यक्रम को ध्यान में रखते हुए विभागीय सचिव ग्रामीण कार्य विभाग, बिहार पटना के दिनांक-29.11.2019 के मौखिक आदेश के अनुपालन में तैयार किया गया है।

प्राक्कलन में कुल 390 मीटर की लंबाई में मिट्टी भराई का प्रावधान करते हुए उसके उपर G.S.B Grading-I एवं WBM Grade-III करने का प्रावधान है। प्राक्कलन वर्तमान अनुसूचित दर पर तैयार कराया गया।

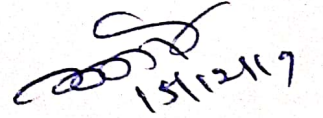
प्राक्कलन तकनीकी अनुमोदन हेतु दो प्रतियों में समर्पित की जा रहीं हैं।


15/12/19

कनीय अभियंता
ग्रामीण कार्य विभाग, बेलसंड


15/12/19

सहायक अभियंता
ग्रामीण कार्य विभाग, बेलसंड


15/12/19

कार्यपालक अभियंता
ग्रामीण कार्य विभाग, बेलसंड

YEAR (2018 - 2019)

FORMAT F-5

GENERAL ABSTRACT OF COST

Block:--Runnisaipur

District:--Sitamarhi

Length of Road:-- 0.390 KM

Name of Road:-- Emergent Construction of Road from PWD Road to Rampur Village for Proposed Visit of CM, Bihar

SL. No.	Item of Work	Amount
A	TOTAL COST OF CONSTRUCTION	₹ 14.372 16.721 Lakhs
C	ADD LABOUR CESS 1 % ON (A+B)	₹ 0.143 0.167 Lakhs
D	ADD GST 12 % ON (A+B)	₹ 2.006 1.724 Lakhs
TOTAL		₹ 18.894 Lakhs

16.240 Lacs

Junior Engineer

Asstt. Engineer

Executive Engineer

Technically Approved for Rs 16.24 Lac
(Sixteen lac twenty four thousand only)

अधीक्षण अभियन्ता
ग्रामीण कार्य विभाग
पर्य अंचल, सीतामढ़ी

03/3/2020

SUMMARY OF COST ESTIMATE FOR THE PROJECT

LINK ROUTE NO. S021
 CNCPL No. 11
 NAME OF ROAD : Emergent Construction of Road from PWD Road to Rampur Village for Proposed Visit of CM, Bihar
 DISTRICT Sitamarhi
 BLOCK Runnisaipur
 LENGTH OF ROAD (in Km) 0.390
 LENGTH OF BT PAVEMENT 390
 LENGTH OF CC PAVEMENT 0
 LENGTH OF NO WORK 0
 CD STRUCTURES
 HUME PIPE 0
 RCC CULVERT 0
 BOX CELL CULVERT 0
 CAUSEWAY / MINOR BRIDGE 0

Sl. No.	DESCRIPTION	AMOUNT (LAKHS)	Labour Cess 1%	GST 12 %	AMOUNT (LAKHS)
1	EARTHWORK	3.59	0.04	0.43	4.06
2	GSB	9.23	0.09	1.11	10.44
3	WBM GRADE III	3.90	0.04	0.47	4.40
	SUB TOTAL OF PAVEMENT COST IN LAKHS =	16.72	0.17	2.01	18.89
	Sub Total ₹ :--	16.721	0.167	2.006	18.894
	TOTAL COST OF PROJECT IN LAKHS =	16.721	0.167	2.006	18.894

Total Cost of Project Per Km (IN LAKHS):--

48.447

Junior Engineer
 RWD Works Division, Belsand

Assistant Engineer
 RWD Works Division, Belsand

Executive Engineer
 RWD Works Division, Belsand

Sl. No.	SDB SL. NO	MORD Ref.No	Description	Unit	NOS	LENGTH	WIDTH	HEIGHT	QUANTITY	RATE	AMOUNT (in Rs.)
SUB HEAD : EARTHWORK											
1	3.4	301.5	Construction of Embankment with material obtained from borrow pits with a lift upto 1.5 m, transporting to the site spreading, grading to required slope and compacting to meet requirement of Tables 300.1 and 300.2 with a <u>lead upto 1000 m & 100 m</u> as per Technical Specification Clause 301.5 . (Including Labour For 1000 m lead (100%))	Cum					1,238.33	150.45	1,86,307.00
2	3.14	303.1	Construction of Subgrade and Earthen Shoulders								
			Construction of subgrade and earthen shoulders with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table 300.2 with lead upto 1000 m & 100 m as per Technical Specification Clause 303.1.								
			A) IN Flexible Road								
			i) Construction of subgrade in Flexible Road	Cum	1.00	390.00	7.275	0.300	851.18		
			Earthen shoulder (Sides of GSB)	Cum	2.00	390.00	1.388	0.200	216.45		
			Earthen shoulder (Sides of WBM)	Cum	2.00	390.00	1.181	0.075	69.10		
			For 1000 m lead @ 100 %	Cum					1,136.73	151.86	1,72,624.00
			B) SUB TOTAL OF CRUST =								3,58,931.00
Sub Head : PAVEMENT LAYERS - GSB & WBM ITEMS											
3	4.1	401	Granular Sub-Base with Well Graded Material (Table:- 400.1)								
			For Grading I Material								
			Construction of granular sub-base by providing Well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller achieve the desired density, complete as per Technical specification clause 401.								
			For Flexible Portion								
			GSB in Earthen Portion	Cum	1.00	390.00	4.050	0.200	315.90		
			Add for extra widening on curve (2%)	Cum	2%				6.32	2,352.17	75,792.26
									322.22	2,866.01	9,23,486.00
			Net GSB Qty. Required form Grading I Material								
4	4.7	405	WBM Grading 3 (By Mechanical Means)								
			Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 3 as per								
			In full width WBM Qty. Required	Cum	1.00	390.00	3.75	0.075	109.69		
			Add for extra widening on curve (2%)	Cum	2%				2.19	286.29	320,306.84
			Net WBM -3 Qty						111.88	3,482.66	3,89,649.00
			C) SUB TOTAL OF CRUST =								13,13,126.00
			TOTAL COST OF PAVEMENT IN RS. (A+B+C+D+E+F+G)=								14,37,160.50

15.11.19
15.11.19
15.11.19

Name of Road:-

Analysis for Carriage by Road & Rail

Emergent Construction of Road from PWD Road to Rampur Village for
Proposed Visit of CM, Bihar

District:-

Sitamarhi

Block :- Runnisaidpur

Sl No	Item with Source	Unit	Source	Pucka / Surface		Katcha		Loading & Unloading Cost	Carriage Cost by Rail Head	₹ Per Ton. Km by Tipper	₹ Per Ton. Km by Truck
				8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59				
1	Stone Metal Gr-I & Gr-II (Shekhpura by Rail 194.32 Km)	Cum	Janakpur Road	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	89.90	1382.62	8.20	7.47
	Stone Metal Gr-I & Gr-II (Shekhpura by Rail 194.32 Km)	Cum	Janakpur Road	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	193.62	1382.62	9.90	8.99
2	Stone Metal Gr-III (Shekhpura by Rail 194.32 Km)	Cum	Janakpur Road	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	89.90	1294.52	19.80	18.09
	Stone Metal Gr-III (Shekhpura by Rail 194.32 Km)	Cum	Janakpur Road	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	193.62	1294.52	19.80	18.09
3	Stone Aggregate / Chips (Mirza Chowki by Rail 303.57 Km)	Cum	Janakpur Road	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	89.90	1699.19	19.80	18.09
	Stone Aggregate / Chips (Mirza Chowki by Rail 303.57 Km)	Cum	Janakpur Road	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	193.62	1699.19	19.80	18.09
4	Stone Boulder (Shekhpura by Rail 194.32 Km)	Cum	Janakpur Road	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	89.90	1334.54	19.80	18.09
	Stone Boulder (Shekhpura by Rail 194.32 Km)	Cum	Janakpur Road	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	193.62	1334.54	19.80	18.09
5	Course Sand	Cum	Kollwar	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	104.88			
6	Binding Material/Moorum (Shekhpura by Rail 194.32 Km)	Cum	Janakpur Road	8.00 6.00	8.00 6.00	8.00 6.00	8.00 6.00	55.94	1001.63	1001.63	1451.17
	Binding Material/Moorum (Shekhpura by Rail 194.32 Km)	Cum	Janakpur Road	8.00 6.00	8.00 6.00	8.00 6.00	8.00 6.00	104.88	1001.63	1001.63	1465.07
7	Local Sand	Cum	Local	8.00 4.59	8.00 4.59	8.00 4.59	8.00 4.59	104.88			
8	Brick	1000 Nos	Local	8.00 2.00	8.00 2.00	8.00 2.00	8.00 2.00	441.62			
9	Cement	MT	Local	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	317.64			
10	Steel	MT	Local	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	337.70			
11	Bitumen Emulsion	MT	Muzaffarpur	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	365.00			
	Bitumen Emulsion	MT	Muzaffarpur	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	365.00			
12	Bitumen	MT	Muzaffarpur	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	365.00			
	Bitumen	MT	Muzaffarpur	8.00 8.00	8.00 8.00	8.00 8.00	8.00 8.00	365.00			
13	Hume Pipe (1000 mm)	m	Local	10.00 10.00	10.00 10.00	10.00 10.00	10.00 10.00	75.69			
14	Hume Pipe (600 mm)	m	Local	25.00 25.00	25.00 25.00	25.00 25.00	25.00 25.00	32.44			
15	Hume Pipe (300 mm)	m	Local	8.00 60.00	8.00 60.00	8.00 60.00	8.00 60.00	32.44			
Total											Rs. 1987.03
Total											Rs. 1857.69
Total											Rs. 2262.36
Total											Rs. 1916.44
Total											Rs. 1853.37
Total											Rs. 1451.17
Total											Rs. 157.83
Total											Rs. 723.14
Total											Rs. 377.40
Total											Rs. 397.46
Total											Rs. 686.21
Total											Rs. 686.21
Total											Rs. 290.83
Total											Rs. 118.49
Total											Rs. 68.30

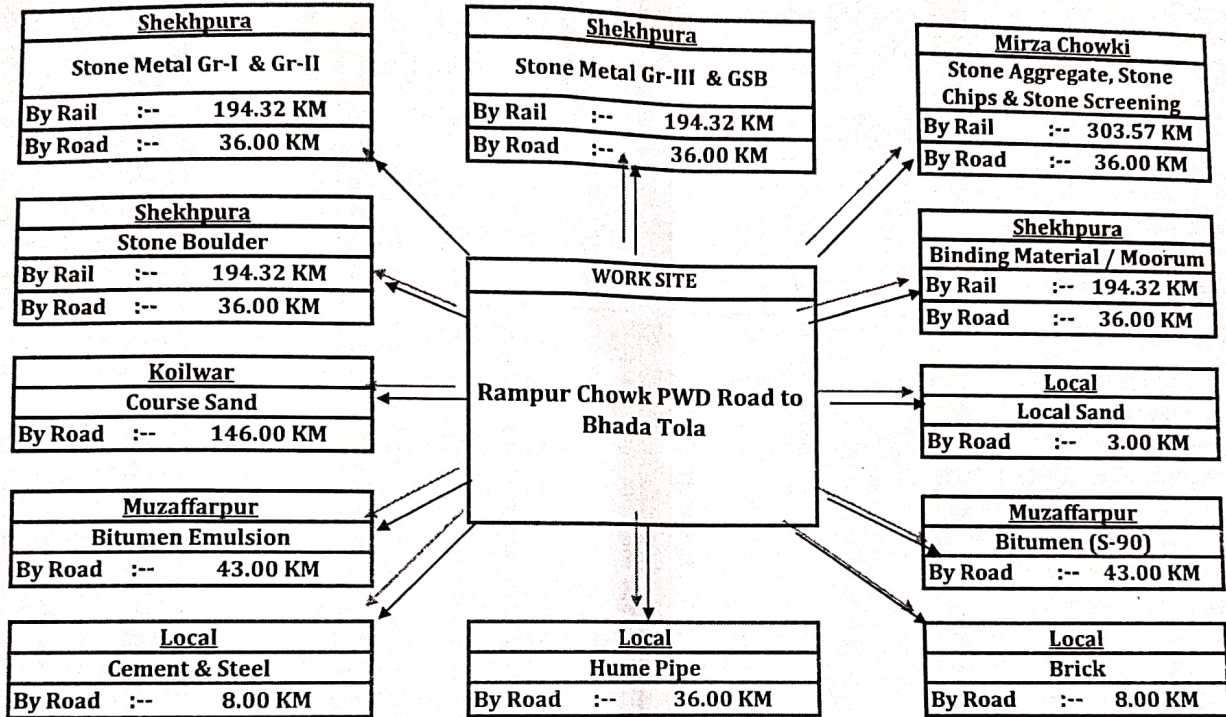
Cost of Haulage Excluding Loading & Unloading as per SOR

Figure -3

Quarry Map

Name of Road :-- Rampur Chowk PWD Road to Bhada Tola
Block :-- Runnisaidpur
District :-- Sitamarhi

Length of the Road:- 2.450 KM



* Subjected to Verification of Lead

[Signature]
15/12/2019
J.E

[Signature]
15/12/19
A.E

[Signature]
15/12
E.E

S.E.

Sl. No.	SDB Sl. No.	MORD Ref.	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
1	3.4	302	Construction of Embankment with Material Obtained from Borrow Pits Unit = cum Taking output = 100 cum				
			Rate per cum = (a+b+c+d+e)/100 =				150.45
2	3.14	303	Construction of Subgrade and Earthen Shoulders Unit = cum Taking output = 100 cum Rate per cum = (a+b+c+d+e)/100	CUM			150.45
			Total Cost				151.86
			PAVEMENT CRUST LAYERS				
3	4.1	401	Granular Sub-Base with Well Graded Material (Table:- 400-1) For Grading I Material Unit = cum Taking output = 300 cum	cum			151.86
			Carriage Cost Carriage for material Carriage for material below 2.36 mm (Stone Screening)				
			Rate per cum = (a+b+c+d+e)/300	cum	0.960	152.96 1857.69	1470.89 372.79
			Rate per cum with carriage	cum	0.240	1857.69	445.85
			Total Cost	CUM		152.96	2866.01
4	4.7 (3-B)	405	Water Bound Macadam with Stone Screening Type "B" Gr- III WBM Grading 3 By Mechanical Means Unit = cum Taking output = 360 cum Rate per cum = (a+b+c+d+e)/360 CARRIAGE GR-III & Stone Screening Rate per cum = (a+b+c+d+e+f)				
			8-36.34 789.01				2251.88 2028.61
			2693.65 3482.66	Cum	1.45	1857.69	2862.75 2863
			Total Cost	cum			3482.66

Analysis of Rates (FORMAT F8)

Sl. No.	SDB Sl. No.	MOR D Ref	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
1	3.4	302 (A)	Construction of Embankment with Material Obtained from Borrow Pits Construction of embankment with approved material obtained from borrow pits with a lift upto 1.5 m, transporting to site, spreading, grading to required slope and compacting to meet requirement of Tables 300.1 and 300.2 with a lead upto 1000 m as per Technical Specification Clause 301.5 Unit = cum Taking output = 100 cum				
		a) Labour					
		Mate		day	0.04	293.00	11.72
		Mazdoor (Unskilled)		day	1.00	277.00	277.00
		b) Machinery					
		Hydraulic Excavator 0.9 cum bucket capacity @ 60 cum per hour		hour	1.67	1958.00	3,269.86
		Tipper 5.5 cum with 10 t capacity		hour	4.50	1,018.00	4,581.00
		Add 10 % of the cost of carriage by tipper					458.10
		Dozer D-50 for spreading @ 200 cum per hour		hour	0.50	3,319.00	1,659.50
		Tractor mounted grader arrangement @ 25 cum per hour		hour	1.00	588.00	588.00
		Water tanker 6 kl capacity		hour	2.00	183.00	366.00
		Three wheel 80-100 kN Static Roller @ 80 cum per hour		hour	1.25	781.00	976.25
		c) Material					
		Water		kl	12.00	40.00	480.00
		Compensation for earth taken from private land		cum	100.00	23.78	2,378.00
		d) Over Heads @ 6% on (a+b+c)					0.00
		e) Contractors Profit @ 10% on (a+b+c+d)					0.00
		Cost for 100 cum = a+b+c+d+e					15,045.43
		Rate per cum = (a+b+c+d+e)/100=					150.45
2	3.14	303	Construction of Subgrade and Earthen Shoulders Construction of subgrade and earthen shoulders with approved material obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table 300.2 with lead upto 1000 m as per Technical Specification Clause 303.1. Unit = cum Taking output = 100 cum				
B		a) Labour					
		Mate		day	0.04	293.00	11.72
		Mazdoor (Unskilled)		day	1.00	277.00	277.00
		b) Machinery					
		Hydraulic excavator 0.9 cum bucket capacity @ 100 cum per hour		hour	1.67	1,958.00	3,269.86
		Tipper 5.5 cum capacity, 4 trips per hour		hour	4.50	1,018.00	4,581.00
		Add 10 % of the cost of carriage to cover loading & unloading		cum			458.10
		Dozer D-50 for spreading @ 100 cum per hour		hour	0.50	3,319.00	1,659.50
		Tractor mounted grader arrangement for grading @ 100 cum per		hour	1.00	588.00	588.00
		Water tanker with 6 kl capacity		hour	2.00	183.00	366.00
		Three wheel 80-100 kN Static Roller @ 70 cum per hour		hour	1.43	781.00	1,116.83
		c) Material					
		Water		kl	12.00	40.00	480.00
		Compensation for earth taken from private land		cum	100.00	23.78	2,378.00
		d) Over Heads @ 6% on (a+b+c)					0.00
		e) Contractors Profit @ 10% on (a+b+c+d)					0.00
		Cost for 100 cum = a+b+c+d+e					15,186.01
		Rate per cum = (a+b+c+d+e)/100					151.86
		PAVEMENT CRUST LAYERS					
3	4.1	401	Granular Sub-Base with Well Graded Material (Table:- 400- 1) Construction of granular sub-base by providing Well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller achieve the desired density, complete as per Technical specification clause 401.				
		For Grading I Material					
		Unit = cum					
		Taking output = 300 cum					
		a) Labour					
		Mate		day	0.40	293.00	117.20
		Mazdoor (Skilled)		day	2.00	352.00	704.00
		Mazdoor (Unskilled)		day	8.00	277.00	2216.00
		b) Machinery					
		Tractor Mounted Grading Arrangement @ 50 cum per hour		hour	6.00	588.00	3528.00
		Three wheel 80-100 kN Static Roller @ 10 cum per hour		hour	30.00	781.00	23430.00
		Tractor with Rotavator 25 cum per hour		hour	12.00	570.00	6840.00
		Water tanker 6 kl capacity		hour	5.00	183.00	915.00

Analysis of Rates (FORMAT F8)

Sl. No.	SDB Sl. No.	MOR D Ref	DESCRIPTION	Unit	Quantity	Rate	Amount in Rs
4	4.2	c)	Material				
			For grading-I Material				
			Well graded granular sub-base material as per Table 400.1				
			53 mm to 26.5 mm @ 35 per cent	cum	126.00	458.22	57735.72
			26.5 mm to 4.75 mm @ 45 per cent	cum	162.00	499.76	80961.12
			2.36 mm below @ 20 per cent (Stone Screening)	cum	72.00	185.94	13387.68
			Cost of water	kl	30.00	40.00	1200.00
			(i) Rate per cum for grading-I Material				
			d) Over Heads @ 6% on (a+b+c)				0.00
			e) Contractors Profit @ 10% on (a+b+c+d)				0.00
			Cost of GSB without carriage				0.00
			Rate per cum = (a+b+c+d+e)/300	cum			191034.72
							636.78
4	4.7 (3-B)	405	Water Bound Macadam with Stone Screening Type "B" Gr- III				
			WBM Grading 3				
			Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 3 as per Technical Specification Clause 405.				
			(B) By Mechanical Means				
			Unit = cum				
			Taking output = 360 cum				
		a)	Labour				
			Mate	day	0.68	293.00	199.24
			Mazdoor (Skilled)	day	2.00	352.00	704.00
			Mazdoor (Unskilled)	day	15.00	277.00	4155.00
		b)	Machinery				
			Tractor mounted grader arrangement	hour	7.20	588.00	4233.60
			Three wheel 80-100 kN @ Static roller 8 cum per hour	hour	45.00	781.00	35145.00
			Water tanker 6 kl capacity	hour	24.00	183.00	4392.00
		c)	Material (Refer Tables 400.7, 8, 9 and 10)				
			Aggregate				
			Grading 3 53 mm to 22.4 mm @ 0.91 cum per 10 sqm for compacted thickness of 75 mm	cum	435.60	458.22	199600.63
			Stone Screening:- Type B 11.2 mm for Grading 3 @ 0.18 cum per 10 sqm	cum	86.40	345.52	29852.93
			Water	kl	144.00	40.00	5760.00
							0.00
		d)	Over Heads @ 6% on (a+b+c)				0.00
		e)	Contractors Profit @ 10% on (a+b+c+d)				284042.40
			Cost for 360 cum = a+b+c+d+e				789.01
			Rate per cum = (a+b+c+d+e)/360				

add overhead 83634

13-12-19
DE

NAME OF ROAD : :- Emergent Construction of Road from PWD Road to Rampur Village for Proposed Visit of CM, Bihar

BLOCK :- Runnisaidpur

BLOCK	:-	Runhisalupur
		Km

LENGTH OF ROAD :- 0.390 Km

Annexure - 1

Proposed Rigid Pavement	
Total Brick Soling	0
On Earthen Portion	0
Total Rigid Pavement	0

EARTHWORK CHART

Emergent Construction of Road from PWD Road to Rampur Village for Proposed Visit of
CM, Bihar

Name of Road:

CNCPL No.:

Block:

11

Runnisaidpur

BT ROAD		PCC ROAD	
BT Road Top Width =	6.00 m	PCC Road Top Width =	5.00 m
Width of Carriage Way =	3.75 m	Width of Carriage Way =	3.75 m

CH	Area Cut (m ²)	Area Fill (m ²)	Volume Cut (m ³)	Volume Fill (m ³)	Flexible		Rigid	
					Volume Cut (m ³)	Volume Fill (m ³)	Volume Cut (m ³)	Volume Fill (m ³)
0	0.000	3.919						
50	0.000	3.804	0.000	193.080				
100	0.000	4.348	0.000	203.820				
150	0.000	4.412	0.000	219.000				
200	0.000	5.203	0.000	240.370				
250	0.000	8.141	0.000	333.590				
300	0.000	8.855	0.000	424.880				
350	0.000	17.997	0.000	671.290				
390	0.000	7.734	0.000	514.620	0.000	2800.650		
NET E/W (Including Crust) =			0.000	2800.650	0.000	2800.650	0.000	0.000

Proposed Flexible Pavement

E/W Including Crust	2800.650
Deduction	
GSB	315.900
WBM-II	0.000
WBM-III	109.688
Subgrade & Shoulder	1136.730
Soil Stabilization With Fine Sand	0.000
Net Qty of E/w for Filling	1238.330
Box Cutting	0.000
Cutting	0.000
Net Cut Volume	0.000

Proposed Rigid Pavement

E/W Including Crust	0.000
Deduction	
GSB	0.000
WBM-III	0.000
PCC	0.000
Subgrade & Shoulder	0.000
Soil Stabilization With Fine Sand	0.000
Net Qty of E/w for Filling	0.000
Box Cutting	0.000
Cutting	0.000
Net Cut Volume	0.000

15/12/19
DE

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