	PROPOSED ESTIMATE FOR CONSTRUCTION OF RCC BOX CELL BRIDGE CLEAR OPENING 3M X 3M											
Т	The rates are taken from PWD(WB) schedule of rate for Road & Bridge works 1.12.15 & 11 th,12th ,13th,14th Addenda & Corrigenda and Building works of Midnapore west effect from 01.11.2017 Follow IRC SP-20.											
Sl. No	Page No & It No.	Description	No.	L. (m.)	B. (m.)	H. (m.)	Quantity	Unit	Rate (Rs.)	Amount (Rs.)		
	278,1 2.01(a )(i)	Earthwork in excavation for foundation of structures as per drawing and technical specification including setting out, removing, spreading or stacking of spoils within a lead of 150 m. as directed and including trimming the sides of the trenches, leveling, dressing and ramming the bottom, complete as per direction of the Engineer-in-Charge.I)In all sorts of soil excluding marshy soil & rocks (soft or hard) by manual means.										
		a)Depth up to 3 m. :										
		With pumping out water and including with sho	ring.									
1		Bed	1	7.100	3.750	0.550	14.644					
		cut-off wall	1	24.700	0.300	1.500	11.115					
		Wing wall	4	2.433	3.000	1.650	48.173					
		Approach D/S	1	8.140	1.550	0.600	7.570					
		Approach U/S	1	8.140	1.550	0.600	7.570					
		PCC Wall	1	21.140	0.600	1.575	19.977					
		Total					109.050	m <sup>3</sup>	124.00	13522.00		
2	Rate Analy sis	Supplying, spreading of Moorum(70%) & sand(30%) by volume to the required thickness in layers as specified and directed by the EIC stabilizing the same by adding requisite quantity of water to get OMC remixing in wet rolling by power roller to the required thickness to proper grade camber with power roller including proper tampering and curing the same for 5 days to have max. dry density as specified and lighing, guarding, barracading and making adequate earthen bundh for protecting the edges etc.										
	ed	Bed	1	7.100	3.750	0.150	3.994					
		Total					3.994	m <sup>3</sup>	637.98	2548.00		
3	Rate Analy sis	Sand filling in foundation trenches and at the ba exceeding 15 cm. including inundating each lay supply of sand. Quality of sand is to be approve	ck of al er by pr d by the	outments, ofuse wat e Engineer	wing-wa ter and po r-in-char	alls etc. oking an ge.	with good lo d ramming	ocal san layer by	id free from e y layer comp	earth in layers not lete excluding		
	Attach	Wing wall	4	2.433	3.000	0.300	8.759					
	ed	Total					8.759	m <sup>3</sup>	515.22	4513.00		

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Sl. No	Page No & It No.	Description	No.	L. (m.)	<b>B.</b> (m.)	H. (m.)	Quantity	Unit	Rate (Rs.)	Amount (Rs.)		
		Providing and laying Design Mix concrete for plain / reinforced concrete work in any part of bridge (excluding bottom plugging) with coarse aggregates of appropriate nominal size and grading, fine aggregate (sand) conforming to proper grading zone, both of approved quality and cement, as necessary, including labour, cost and carriage of all materials and including preparation of design mix, approval of the same by the Engineer-in-Charge and cost for quality control, sampling, testing etc. all complete but excluding cost of labour and materials for formwork & reinforcement works.M-15 Grade.Using concrete.										
		M15										
		Bed	1	7.100	3.750	0.100	2.663					
		Wing wall	4	2.433	2.500	0.150	3.650					
4	Rate		4	2.133	2.500	0.200	4.266					
	Analy		4	2.033	2.500	0.200	4.066					
	SIS Attach		4	1.933	2.500	0.200	3.866					
	ed		4	1.833	2.500	0.200	3.666					
			4	1.733	2.500	0.200	3.466					
			4	1.633	2.500	0.200	3.266					
			4	0.941	2.500	2.500	23.525					
		PCC Wall	1	21.140	1.575	0.250	8.324					
		Approach D/S	1	8.140	1.550	0.075	0.946					
		Approach U/S	1	8.140	1.550	0.075	0.946					
		Total					62.649	m <sup>3</sup>	5112.32	320284.00		
		with coarse aggregates of appropriate nominal size and grading, fine aggregate (sand) conforming to proper grading zone, both of approved quality and cement, as necessary, including labour, cost and carriage of all materials and including preparation of design mix, approval of the same by the Engineer-in-Charge and cost for quality control, sampling, testing etc. all complete but excluding cost of labour and materials for formwork & reinforcement works.M-20 Grade.Using concrete mixer.										
		M20										
		Raft	1	7.100	3.750	0.300	7.988					
	Rate	shear wall	2	3.750	0.400	3.000	9.000					
5	Analy		1	3.750	0.300	3.000	3.375					
5	Attach	slab	1	7.100	3.750	0.300	7.988					
	ed	Haunch	8	0.150	0.150	3.750	0.338					
		Cut-off wall	1	24.700	0.300	1.500	11.115					
		Railing	14	0.300	0.150	0.150	0.095					
			4	7.100	0.150	0.150	0.639					
		Wearing course	1	7.100	3.750	0.050	1.331					
		Approach slab	2	2.000	3.750	0.300	4.500					
		Total					46.367	m <sup>3</sup>	5462.17	253266.00		
6	Rate Analy sis	Supplying, fitting and placing HYSD bar reinfor removal of loose rust (if any), cutting to requisit conforming to IS 280 at every intersection hook annealed wire and cost of loading, unloading, ca and direction of Engineer-in-charge.	rcement e length ed and l arriage o	in Sub-st bending bent to co of all stee	ructure i ,binding rrect sha l materia	ncludin with and pe and p ls comp	g initial stra nealed wire placed on fo lete as per c	ightenii not less rms etc. lrawing	ng, straighten than 1 mm i including co and technica	ing of coils bars, n size and st of black l specifications		
	ed	Rates as per analysis attached(1.5% of Concrete	e Volum	ie)								
		Tor Steel /H.Y.S.D. Bars		BBS a	ttached		5.460	MT	56637.36	309225.00		

Sl. No	Page No & It No.	Description	No.	L. (m.)	B. (m.)	H. (m.)	Quantity	Unit	Rate (Rs.)	Amount (Rs.)			
		Hire and labour charges for Shuttering with or without staging upto 4.0 m height using approved stout props with wooden planks/ply wood/steel sheet plate with required bracing for any kind of plain or reinforced concrete works in all sorts of minor structure including culvert, box culvert, cross-drain etc. The rate is inclusive of fitting, fixing and striking out after completion of work as per specification and direction. (b) Where staging is not required.											
		Form work with ply wood in well steining, abutment, box type bridge, vertical, inclined sides, rail post etc.											
		for portin of hieght 1m											
		Box shear wall	2	7.100		0.300	4.260						
			2	3.750		0.300	2.250						
			6	3.750		0.700	15.750						
			4	0.400		0.700	1.120						
			2	0.300		0.700	0.420						
		wing wall	8	2.500		1.000	20.000						
			4	2.350		1.000	9.400						
			4	1.917		1.000	7.668						
		Cut off wall	2	24.700		1.500	74.100						
		PCC Wall	2	21.140		1.500	63.420						
		Total	198.388	m <sup>2</sup>	214.00	42455.00							
	322.1	for portin of hieght above 1m to 3m											
7	8.05(b	Box shear wall	6	3.750		2.300	51.750						
	)		4	0.400		2.300	3.680						
			2	0.300		2.300	1.380						
			2	7.100		0.300	4.260						
			2	3.750		0.300	2.250						
		wing wall	8	2.500		0.200	4.000						
			4	1.850		0.200	1.480						
			4	1.417		0.200	1.134						
			4	2.500		2.635	26.350						
			4	2.500		2.512	25.120						
		Rail & Post	14	4.000		0.300	16.800						
			2	6.050		0.150	1 815						
		Total	0.150	140 019	m <sup>2</sup>	214.00	29964.00						
		Hire and labour charges for Shuttering with or w planks/ply wood/steel sheet plate with required l structure including culvert, box culvert, cross-dr work as per specification and direction. (b) Where staging is not required.	vithout a pracing ain etc.	staging uj for any k The rate	pto 4.0 m find of pla is inclusi	height ain or re ve of fit	using appro inforced co tting, fixing	oved stor oncrete v and str	ut props with works in all s iking out afte	wooden orts of minor er completion of			
			2	3.000	3.750		22.500						
		Total					22.500	m <sup>2</sup>	214.00	4815.00			

Sl. No	Page No & It No.	Description	No.	L. (m.)	B. (m.)	H. (m.)	Quantity	Unit	Rate (Rs.)	Amount (Rs.)	
	Rate	Boulder Work									
8	Analy	Approach D/S	1	8.140	1.550	0.525	6.624				
0	Attach	Approach U/S	1	8.140	1.550	0.525	6.624	F		'	
	ed	Total					13.248	m3	753.00	9976.00	
	TOTAL COST (A) Rs.										
	Add GST(6% CGST+6% SGST)On Sl No A)B@12.0% Rs.										
		C	ost of Civ	vi works e	excluding	, labour	welfare cess	s Total (	(C=A+B)Rs.	1109436.00	
					Labour	welfare	cess (on S	l.no C)@	@1.0%D Rs.	11094.00	
		Cost	of Civi w	orks inclu	ading lab	our welf	fare cess am	iount (	E=C+D) Rs.	1120530.00	
	Add Contingency (on Sl.no C) @3.0% Rs.										
	TOTAL ESTIMATED COST Rs.										
TOTAL ESTIMATED COST.(IN WODD) ELEVEN LAR HEIETV THDEE THOUSAND ELCHT HUNDED THDTE											

	R					
1	Rate of Item as per relevent section (P-297/It-13.02	Rs	3308.00			
2	Add: Cost of Steel = Quantity of Steel(1.05) x Bas Table I – 1 of the Schedule of Rates). P-215,It no-2 N:B-(ii)b,Tor Steel rods/HYSD Bars/TMT bars(JSW/JSPL/Shyam/SRMB/SSL/BMASL/Elec IS:1786).Rate-Rs.43750.00	Rs	45937.50			
3	Add: Cost of Carriage including necessary loading /Stack yard/Godown to the site of execution (exclu = (Cost of Carriage including loading – unloading	t) Rs	235.11			
	Loading & Unloading 96 x @ 0.75 =72.00x1.05	P-225	,It-1.03(h)	75.60	L+U=75%	
	Add cost of carriage 20 KM from Medinipur Stack	P-2	227,It-5			
	0-5 KM=82x1.05	Rs	86.10			
	5-10KM (7.30x5)=36.50x1.05	Rs	38.33			
	10-20KM (6.70x10)=67.00x1.05		70.35			
	20-50KM (6.30x30)		0.00			
	50-100KM (5.60x50)		0.00			
	100-150KM (5.30x50)		0.00			
	The rate provided is exclusive of cost of steel ma	terials. C	onstruction	wing should add cost &		
	carriage of 1.05 MT (considering 5% wastage) of s	steel mate	rials to arriv	e at the final consolidate	ed	
	item rate. (P-	297,Note	)			
	тот					
4	Add: Overhead Charges @ 5% /15% /20% of (2+3	3) as the c	ase may be (	vide Sl. 3 of	Rs	2308.63
5	Add: Contractor"s Profit @ 10% of (2+3+4)				Rs	4848.12
		S) Rs	56637.36			

Rate Aaysis for Cocrete(Format C,1st Corrigendum,P-1)Case-II											
Grada	20mm		1	0mm							
Cost of ma	terial from F 22,11th Corr	Pakur(Medinipur) P- rigenda.P-7	1700.00			15	69.00				
L+U(P-224,	,1.03(c))	57.75			-		L+U+S	77.00	L=40%		
		Up to 20KM						L+U	57.75	U=35%	
P-227,It-3								S	19.25	S=25%	
Upto 5km		124.00						L=Loading			
5-10km	10.90X5	54.50		337.25		33	37.25	U=Unloading			
10-20km	10.10X10	101.00						S=Stacking			
20-50km	9.50X30	0.00									
50-100	8.40X50										
100-150	7.90X50	227.25	2	027 25	-	10	06.25				
		557.25	Ceme	nt Con	, ocrete	19	00.23				
			ceme								
Cost of 20 n	nm stone chi	ps	0.9	cum	0.6	0.54	2037.25	1100.12			
Cost of 10 n	nm stone chi	ps	0.9	cum	0.4	0.36	1906.25	686.25			
P-208,Table	e No-3.2				(5717/1006	100		2206.00	4001 0		
Cost of Cen	hent(PPC/PS	C/OPC43) P-215,11t	1 . /	. 1	(5717/1000	))x400		2286.80	400kg Cem	ent for M20	
Providing an	nd laying De	sign Mix concrete for	plain / reinf	orced				1280.00	Ggrade(Foi	Estimation	
concrete wo	rk in any pa	rt of bridge (excluding	bottom plu	gging)				1389.00	purpos	e)From	
with coarse	aggregates of	of appropriate nominal	size and gra	ading,					dura	bility	
fine aggrega	ite (sand) co	nforming to proper gra	iding zone, i	both					consideratio	on, the value	
of approved	quanty and	cement, as necessary,	including la	bour,					of minimu	Im cement	
dosign mix	approval of	the same by the Engin	g preparation	101					content and	t maximum	
cost for qua	lity control	sampling testing etc	all complete	but						in the mix	
evoluting of	nty control,	and materials for for	an complete	out					docign sho	l ll he es per	
reinforceme	nt works M-	20 Grade Using conc	rete						the direct	ion of the	
mixer (P-32	$\frac{111}{2} \times \frac{111}{2} \times 11$	(b))11th corrigendum	cic						Engineer in	Charge (P	
111Xc1.(1-32)	22,1101110.07								273 N	$\left[ ote 2 \right]$	
									525,1	0(0-2)	
							Total	5462.17			
Gradation of	f Stone Meta	al(Graded Aggregates)		20mm		1	0mm				
Cost of mate	erial from Pa	akur(Medinipur) P-22	1700.00			15	69.00				
L+U(P-224,	,1.03(c))	57.75						L+U+S	77.00	L=40%	
		Up to 20KM						L+U	57.75	U=35%	
P-227,It-3								S	19.25	S=25%	
Upto 5km	10.00715	124.00						L=Loading			
5-10km	10.90X5	54.50	:	337.25		3.	37.25	U=Unloading			
10-20km	10.10X10	101.00						S=Stacking			
20-30km	9.30A30 8.40X50	0.00									
100, 150	0.40AJU 7.90X50							<u> </u>			
100-150	1.70A30	227 25	n	037 25	ĭ	10	06.25				
		557.25	6	.057.25	,	17	00.25				
			Ceme	nt Con	crete						
Cost of 20 n	nm stone chi	ps	0.9	cum	0.6	0.54	2037.25	1100.12			
Cost of 10 n	nm stone chi	ps	0.9	cum	0.4	0.36	1906.25	686.25			
P-208, Table	e No-3.2										
Cost of Cen	nent(PPC/PS	C/OPC43) P-215,11tl			(5717/1000	))x350		2000.95	350kg Cem	ent for M15	
Providing an	nd laying De	sign Mix concrete for	plain / reinf	orced					Ggrade(For	Estimation	
concrete wo	rk in any pa	rt of bridge (excluding	bottom plu	gging)				1325.00	purpos	e)From	
with coarse aggregates of appropriate nominal size and grading,									dura	bility	
fine aggrega	ate (sand) co	nforming to proper gra	ading zone, l	both					consideratio	on, the value	
of approved	quality and	cement, as necessary,	including la	bour,					of minimu	um cement	
cost and car	riage of all r	naterials and including	g preparation	n of					content and	1 maximum	
design mix,	approval of	the same by the Engin	eer-in-Charg	ge and					water cemer	nt ratio to be	
cost for qua	lity control,	sampling, testing etc.	all complete	but					considered	in the mix	
excluding co	ost of labour	and materials for forr	nwork &						design sha	ll be as per	
reinforceme	nt works.M-	15 Grade.Using conci	ete						the direct	ion of the	
mixer.(P=32	22,Item18.07	(a))11th corrigendum							Engineer-in	hCharge.(P-	
									323,N	(ote-2)	
							Total	5112.22			
							iotal	5112.32	L		

Rate Analysis										
	Sa	rum								
Description of Item	Moorum									
a) Cost of Morrum at Quarry per cum (11th	n Corrigenc	la &								
Addenda to PWD (WB), SOR: 2015-16	Road &									
BridgeWorks P-3, It-7)		117.00								
b) Carring charge from quarry to work	k site $= 10$	km								
0 -5 KM	Rs	124.00								
5 - 10 KM	Rs	54.50	178.50							
ТО	TAL = Rs	178.50								
c) Loading & Unloading	z		46.50							
62.00 x @ 0.75			46.50							
Total cost of moorum per c	um		342.00		Compacting factor .	67				
Compa	ction by M	oorum (7	0%) & Sa	nd (30%)						
a) Moorum (P-3, Sl No 7)		0.7	1	510.45	Rs	357.31				
b) Sand (P-3, Sl no-3)		0.3	1	342.22	Rs	102.66				
c) Labour and other cost (P-2	242, sl no -	4.04 &	4.05)		Rs	178.00				
Total	[		,		Rs	637.98				
		<b>E</b> <sup>2</sup>	C 1							
		Fine	Sand							
Cost at Site		305	rs/cum	L+U+S	77.00	L = 40%				
(11th Corrigenda & Addenda to PWD (	WB), SOR	: 2015-								
16 Road & Bridge Works P-3 It-3)		. 2010		L+U	57 75	U = 35%				
		-19.25	rs/cum	S	19.25	S = 25%				
		285.75	rs/cum	5	17.20	5 - 25 70				
		203.15	13/Cum	I –L oadi	nσ					
Compacting Factor(280, 12, 04, Note 2)		0.835		U=Unlos	ading					
		0.055		S-Stacki	ing					
		342.22	rs/cum	D-Duck						
Labour Charges		173.00	rs/cum							
280 12 04 11th corrigendum		175.00	15/ Cum							
	Total	515.22	rs/cum							
	10101	515.22	15/Culli							
			Boulder							
Cost at Quarry	255									
(45mm-150)	233									
P-219.It no-6.11th Corrigendum										
L+U( <b>P-224.It 1.03A</b> (a)	46.50		L+U+S	62	L=40%					
P-227.It-3	10.50		L+U	46.5	L=10%					
Unto 5km	124.00		2.0	+0.5	S=25%					
5-110 90X5	54.50		I – Loadir	ισ	5-2570					
10-10 10X10	101.00		U=Unloa	ting						
20.9 50X00	0.00		S=Stackin	1σ						
50.8.40X00	0.00		5-5ackii	- <del>5</del>						
10 7 90 X 00										
Labour and other cost	172.00									
$(P_2/2 \text{ sl } n_2/4 0/4)$	172.00									
Unto 30km	753.00									
Opto JUKIII	155.00									