



GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RAILWAY BOARD

2021/EEM/148/3/ACTM-Part (3) E-3402261

New Delhi, Dated: 30.11.2023

The General Manager

All Indian Railways including Metro Railway/Kolkata, CORE/Prayagraj, ICF/Chennai, CLW/Chittaranjan, RCF/Kapurthala, MCF/Raebareli, DLW/Varanasi, RWF/Bangalore

The Chief Administrative Officers,
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RDSO/ Lucknow and NAIR, Vadodara.

Chief Commissioner of Railway Safety, Lucknow.
CRS/ Northern Circle/ Central Circle/ Eastern Circle/ Southern Circle/ South Central Circle/ South Eastern Circle/ Western Circle.

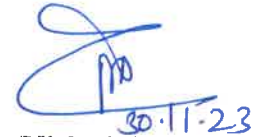
Commissioner of Metro Railway Safety/Delhi

Director General/Director,
IRIEEN, Nasik and Indian Railway Centre for Advance Maintenance Technology, Gwalior

Chairman & Managing Director,
RVNL, DFCCIL, MRVC, IRCON, RITES, PGCIL, New Delhi.

Sub: Advance Correction Slip No. 4 to Railway Manual of AC traction (ACTM) Vol. II Part II Para 17.3 & para 21.2 with regard to power line crossing.

Please find enclosed herewith the Advance Correction slip No. 4 (Modification/Revisions) in Para of Railways Manual of AC Traction (ACTM) Vol. II Part II, Para 17.3 & Para 21.2 with regard to power line crossing for your information and necessary action.



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ACTM Correction Slip No. 4 dtd. 30.11.2023

Existing para						Proposed Para					
(a) Vertical clearance for OHE (Other than high rise OHE) :						(a) Vertical clearance for OHE (Other than high rise OHE) :					
Table: 17.3 (a)						Table: 17.3 (a)					
S.N.	Overhead crossing voltage	Minimum clearance from Rail Level		Minimum clearance to be maintained between lowest transmission line crossing conductor and railway structure as per clause 61 CEA	Minimum clearance to be maintained between highest traction conductor and lowest transmission line crossing conductor as per clause 69 CEA	S.N.	Overhead crossing voltage(AC)	Minimum clearance from Rail Level		Minimum clearance to be maintained between lowest transmission line crossing conductor and railway structure as per clause 63 of CEA Regulation-2023	Minimum clearance to be maintained between highest traction conductor and lowest transmission line crossing conductor as per clause 71 of CEA Regulation-2023
		Existing power line crossing for existing Non-electrified line	New power Line crossing (for electrified or non-electrified routes) or existing power line crossing planned for alteration or modification (for electrified or non-electrified routes)					Existing power line crossing for existing Non-electrified line	New power line Crossing (for Electrified or non-electrified routes) or existing power line crossing planned for alteration or modification (for Electrified or non-electrified routes) as per Clause 60 of CEA Regulation (measures related to safety and electric supply) 2023		
(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
1	Upto & including 11 kV	By underground cable				1	Upto & including 66 kV	By underground cable			
2	Above 11 kV & upto 33 kV	10860	14660	3700	2440	2	Above 66 kV & upto 132 kV	11760	15560	4600	3050
3	Above 33 kV & upto 66 kV	11160	14960	4000	2440	3	Above 132 kV & upto 220 kV	12660	16460	5500	4580
4	Above 66 kV & upto 132 kV	11760	15560	4600	3050	4	Above 220 kV & upto 400 kV	14460	18260	7300	5490
5	Above	12660	16460	5500	4580	5	Above 400 kV & upto 500 kV	15360	19160	8200	7940
						6	Above 500 kV & upto 765KV	18060	21860	10900	7940

	132 kV & upto 220 kV			✓	
6	Above 220 kV & upto 400 kV	14460	18260	7300	5490
7	Above 400 kV & upto 500 kV	15360	19160	8200	7940
8	Above 500 kV & upto 800KV	18060	21860	10900	7940

Existing Para						Proposed Para					
b) Vertical clearance for high rise OHE: Table: 17.3 (b)						b) Vertical clearance for high rise OHE: Table: 17.3 (b)					
S.N.	Overhead crossing voltage	Minimum clearance from Rail Level	Minimum clearance to be maintained between highest traction conductor and lowest transmission line crossing conductor			S.N.	Overhead crossing voltage(AC)	Minimum clearance from Rail Level		Minimum clearance to be maintained between highest traction conductor and lowest transmission line crossing conductor	Minimum clearance to be maintained between highest traction conductor and lowest transmission line crossing conductor as per clause 71 of CEA Regulation-2023
		Existing power line crossing (for electrified or non electrified routes) For existing non-electrified line	New power Line crossing (for electrified or non electrified routes) or existing power line crossing planned for alteration or modification (for electrified or non electrified routes)	At structure as per clause 61 CEA	At Mid Span as per clause 69 CEA			Existing power line crossing for existing Non electrified line	New power Line crossing (for electrified routes) or existing power line crossing planned for alteration or modification (for electrified or non electrified routes) as per Clause 60 of CEA Regulation (measures Related to safety and electric supply) 2023	At structure	At Mid span
(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
1	Upto & including 11 kV	By underground cable				1	Upto & including 66kV	By Underground cable			
2	Above 11 kV & upto 33 kV	Normally clearances mentioned in 4 are applicable for double stack container routes; however	16660	3700	2440						
3	Above 33 kV & upto 66 kV		16960	4000	2440						

4	Above 66 kV & upto 132 kV	EIG may relax as per clause 21.4	17560	4600	3050	2	Above 66 kV & upto 132 kV	11760	17560	4600	3050
5	Above 132 kV & upto 220 kV		18460	5500	4580	3	Above 132 kV & upto 220 kV	12660	18460	5500	4580
6	Above 220 kV & upto 400 kV		20260	7300	5490	4	Above 220 kV & Upto 400 kV	14460	20260	7300	5490
7	Above 400 kV & upto 500 kV		21160	8200	7940	5	Above 400 kV & upto 500 kV	15360	21160	8200	7940
8	Above 500 kV & upto 800 KV		23860	10900	7940	6	Above 500 kV & upto 765 kV	18060	23860	10900	7940

<p>Note (Applicable for 17.3 (a) & (b):</p> <p>i. All height/ clearance are in mm under condition of maximum sag.</p> <p>ii. For existing power line crossing</p> <p>(a) In case of new line (with or without electrification) column 4 shall be applicable.</p> <p>(b) Dimensions at column 5 are applicable if the nearest OHE structure/fixed structure is within 6000 mm from overhead crossing conductor. In other cases, dimensions at column 6 are applicable.</p> <p>iii. If the crossing is provided with guarding, a minimum clearance of 2000 mm shall be maintained between bottom of the guard wire and highest traction conductor.</p> <p>iv. Height of double stack container to be taken as 7100 mm.</p>	<p>Note (Applicable for 17.3 (a) & (b):</p> <p>i All height/ clearance are in mm under condition of maximum sag.</p> <p>ii. For existing power line crossing dimensions at column 5 are applicable if the nearest OHE structure/fixed structure is within 6000 mm from overhead crossing conductor. In other cases, dimensions at column 6 are applicable.</p> <p>iii. If the crossing is provided with guarding, a minimum clearance of 2000 mm shall be maintained between bottom of the guard wire and highest traction conductor.</p> <p>iv. Height of double stack container to be taken as 7100 mm.</p>
<p>21.2 For electrification works of existing lines and existing electrified lines, existing power line crossings can continue, if dimensions are as per column (5) & (6) above. EIG of the concerned Railway to ensure fulfillment of vertical clearances at column (5) & (6) above, with additional safeguards if necessary. Wherever feasible special design of traction overhead equipment, return conductor, 25kV feeder line be developed keeping in view the need for economy.</p>	<p>21.2 For electrification works of existing track or construction of new track/gauge conversion with electrification existing power line crossing can continue, if dimensions are as per column (5) & (6) above, even if dimensions of column (3) are not satisfied i.e. for electrification works column (3) is not applicable. EIG of the concerned Railway to ensure fulfillment of vertical clearances at column (5) & (6) above, with additional safeguards if necessary. Wherever feasible special design of traction overhead equipment, return conductor, 25kV feeder line be developed keeping in view the need for economy.</p>