

NORTH CENTRAL RAILWAY

Head Quarters' Office,
Engineering Department,
Allahabad.

N0 355-W/CRS/Non AC EOG LHB Coach (LWSCN)/NCR/Bridge,

Dated: 05.03.2013.

CME, CEE, COM, CSTE & CPTM

DRM/ALD, JHS & AGC

Sub: - Sanction for regular operation of Non AC EOG LHB 3-Tier Sleeper (LWSCN) coach fitted with FIAT bogies over GZB-MGS & PWL-BINA section of North Central Railway at a maximum speed of 110 kmph.

Ref:-CRS/NE Circle's sanction letter No. 3499/LHB/Non AC/EOG/NCR/SANC- 55 dated 05.03.2013 (copy enclosed).

Based on RDSO speed certificate No. MC/LHB/Coach dated 14.10.2011, and Railway Joint Safety Certificate No. 61/Non AC EOG LHB Coach (LWSCN)/NCR/2012, CRS/NE Circle vide letter under reference above has accorded sanction for regular operation of Non AC EOG LHB 3-Tier Sleeper (LWSCN) coach fitted with FIAT bogies over GZB-MGS & PWL-BINA section of North Central Railway at a maximum speed of 110 kmph.

This is for your information and further action please.

DA: As above.



05.03.13

(Sachin Verma)
Dy CE/Bridge/HQ
For G.M/Engg.



same

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टेलीग्राम - 'कामरेल्स' लखनऊ

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सत्यमेव जयते

GOVERNMENT OF INDIA
MINISTRY OF CIVIL AVIATION
COMMISSION OF RAILWAY SAFETY, NORTH EASTERN CIRCLE



हजरतगंज, लखनऊ-226 001
Hazratganj, Lucknow-226 001

सं०.3499/LHB/NON-AC/EOG/NCR/SANC/SS

दिनांक : 05.03.2013

मुख्य रेलपथ अभियन्ता,
उत्तर मध्य रेलवे,
इलाहाबाद ।

विषय : Sanction for regular operation of Non AC EOG LHB 3-Tier Sleeper (LWSCN) Coach fitted with FIAT bogies over GZB-MGS & PWL-BINA section of North Central Railway at a maximum speed of 110 kmph.

संदर्भ : महा प्रबन्धक, उत्तर मध्य रेलवे, इलाहाबाद के आवेदन पत्र सं०.355-W/CRS/Non-AC EOG LHB coach (LWSCN)/130 kmph/NCR/Bridge दिनांक 01.01.2013.

Sanction is hereby accorded for regular operation of Non AC EOG LHB 3-Tier Sleeper (LWSCN) Coach fitted with FIAT bogies over GZB-MGS & PWL-BINA section as per RDSO speed certificate No. MC/LHB/Coach, dated 14.10.2011 of North Central Railway as detailed in North Central Railway's Joint Safety Certificate No.61/Non AC EOG LHB Coach (LWSCN)/NCR/2012 at a maximum speed of 110 kmph or the permissible speed of section which ever is less :-

- Observance of all permanent and temporary speed restrictions in force and/or those that may be imposed from time to time on various accords.
- Observance of all conditions as laid in RDSO's speed certificate No. MC/LHB/Coach, dated 14.10.2011 and North Central Railway's Joint Safety Certificate No. 61/Non AC EOG LHB Coach (LWSCN)/NCR/2012 and concomitant track and bridge certificates.

(प्रभात कुमार बाजपेई)
रेल संरक्षा आयुक्त,
पूर्वोत्तर परिमण्डल, लखनऊ ।

सं०.3499/LHB/NON-AC/EOG/NCR

दिनांक : 05.03.2013

Copy forwarded for information to Chief Commissioner of Railway Safety, Lucknow.
All Commissioner's of Railway Safety.

**NORTH CENTRAL RAILWAY
JOINT SAFETY CERTIFICATE
(No. 61/Non AC EOG LHB Coach (LWSCN)/NCR/2012)**

Based on RDSO final speed certificate No. MC/LHB/Coach dated 14.10.2011, **Certified that 3-Tier Sleeper Non AC EOG LHB Coach (LWSCN) fitted with FIAT bogies** having maximum axle load of 16.25 t to RDSO Drg. No.CG-11034 is safe for regular operation on following B.G. sections of North Central Railway at a maximum permissible speed as detailed below, subject to observance of all permanent and temporary speed restrictions in force and those will be imposed from time to time due to track, bridges, overhead equipment, signaling & interlocking, etc..

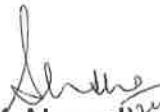
SN	Section		Line	Kilometer		Maximum Proposed Speed (kmph)	Maximum sectional speed existing in the section
	From	To		From	To		
1	MGS	GZB	UP & DN	677.28	1428.50	130	130
2	BINA	LAR	UP & DN	977.00	1037.81	120	120
3	LAR	AGC	UP & DN	1037.81	1343.27	130	130
4	AGC	PWL	UP & DN	1343.27	1479.40	130	150

Further, Railway remarks on para of RDSO's final speed certificate MC/LHB/Coach., dated 14.10.2011 as under for kind perusal.

Para No	Para of RDSO Speed Certificate	Railway Remarks
2.1	Track	
2.1.1	The track shall be to a minimum standard of 52Kg rails on sleepers to M+7 density and minimum depth of ballast cushion below sleeper of 200mm which may consist of at least 100mm clean ballast and the rest in caked up condition on compacted and stable formation.	Minimum standard of track is 52 Kg (72 UTS) rails with sleepers to M+7 density & ballast cushion of 250/100 mm (track certificate enclosed).
2.1.2	For track maintained to lower standard than that mentioned above, the Chief Engineer shall decide the lower maximum permissible speed on the basis of maintenance condition. In this connection, Railway Board's letter No. 65/WDO/SR/26 dated 19/20.10.1966 may be seen. When the Chief Engineer considers that the road bed is not compacted or there is improper drainage, he may suitably restrict the maximum permissible speed depending upon the local conditions.	The maintenance of GZB-MGS & PWL-BINA sections comes under C&M-I Vol- I standard track.
2.1.3	The maximum permissible speed on curves to be decided on the basis of the existing provision of Indian Railways Permanent Manual second reprint-2004.	The maximum permissible speed on curves is as per Indian Railways Permanent Way Manual, reprint-2004.
2.1.4	(i) Wherever condition warrant on account of corrosion on rail/weld collar, wear of rail, cupping in the welds etc necessary precautions should be taken for fish plating/joggle fish plating of the rail/weld. (ii) Zonal Railways may impose such further restrictions of speed as deemed fit, based on the age and condition	It will be ensured.


	of track and the extent of fractures/weld failures/defect generation rate occurring in the sections.	
2.1.5	For track maintenance shall be in accordance with the recommendations contained in RDSO report no. C&M-I, Vol.-I. In this connection, the instructions for the maintenance of track on high-speed routes circulated to the railways under RDSO's DO letter no. CRA/509 dated 07-07-1971 and approved by Railway Board vides letter no. 71/W6/HS/1 dated 21.10.1971 shall also be followed.	It will be ensured.
2.2	Bridges	
2.2.1	The clearance refers to bridges with standard design of girders, slabs, pipe culverts, piers and abutments etc. issued by RDSO for BGML, RBG and MBG-1987 standard loadings. However, the bearings of span 78.8 m (effective) designed for BGML standard loading as per RDSO's drawing no. BA-11154 shall be strengthened by providing two additional anchor bolts.	Bearing of span 78.8 meters (effective) for BGML standard loadings has been strengthened by providing two additional anchor bolts.
2.2.2	Superstructures and bearings of non-standard spans including Arches and sub-structures of all bridges shall be examined under the directions of the Chief Bridge Engineer concerned and certified safe by him in terms of current IRS Bridge Rules, Steel Bridge Code, Concrete Bridge Code, Arch Bridge Code, Bridge Sub Structures and Foundations Code etc, read with up to-date correction slips.	Superstructures & bearings of non-standard spans including Arches are safe
2.2.3	Zonal Railways shall certify the adequacy of existing bridges for permitted rolling stock based on physical condition of bridges by keeping them under observations considered necessary by the Chief Bridge Engineer of the railways.	Bridges are in physically sound condition MGS-GZB & PWL-BINA sections.
2.2.4	Location of bridges on which speed restrictions have been imposed shall be notified by the Railways and incorporated in the working timetable.	There are no such bridges for imposed speed restrictions.
2.2.5	The clearance is subject to the following parameters of 3-Tier Sleeper & Second Class Non AC EOG LHB coach: (I) Maximum axle load : 16.25t (II) Maximum braking force: 5.8t (iii) CG height above Rail level : Not exceeding 1830mm.	Noted
2.2.6	Specific restrictions are applicable as mentioned in the relevant speed certificates of hauling single/multiple locomotives issued by RDSO.	It is ensured
2.3	Signaling	
2.3.1	Provisions of GR, SR, SEM & all extant instructions issued from time to time shall be complied with.	It is ensured
2.3.2	On the sections where EBD of more than 1 km is to be catered for, second distant signal or automatic signaling should be available failing which suitable speed restriction shall be imposed.	It is ensured.
2.4	Traction Installation	
2.4.1	In 25 kV a.c. traction area, the CEE of Railway shall have to ensure that the minimum height of contact wire and electrical clearances as stipulated in provision of chapter-V and V-A of, Electric Traction "Schedule of Dimension of 1676 mm gauge (BG) revised 2004" is not violated and strictly followed to ensure its safe running.	Minimum height of contact wire and electrical clearances as stipulated in provision of Chapter-V and V-A, Electric Traction "Schedule of Dimensions of 1676mm gauge (BG)

		revised-2004" with latest Addendum & Corrigendum Slips are not violated
2.4.2	For DC OHE the condition of operation shall be specified by the CEE of the concerned Railways.	It is ensured.
2.5	Rolling Stock	
2.5.1	Before starting the operation, CME of the concerned Railway shall certify the track worthiness and safety of the rolling stock. He will also ensure proper maintenance of the stocks.	It is ensured.
2.5.2	The Wheel Slide Protection (WSP) device of all the coached in the rake shall be functional at the starting station. If the WSP of any coach becomes defective enroute, the brake system of that particular coach shall be isolated.	It is ensured.
2.6	General	
2.6.1	All the permanent and temporary speed restrictions in force and those that may be imposed from time to time due to track, bridges, curves, signaling and interlocking etc shall be observed.	Shall be observed.
2.6.2	The 3- Tier Sleeper Non AC EOG LHB Coach (LWSCN) infringes clauses 19(b) and 20(b) of Chapter IV(A) of Indian Railways BG Schedule of Dimensions, Revised 2004. These infringements have been condoned by Railway Board vide their letter no. 2011/CEDO/SR/1 dated 04.10.2011.	Noted


(S.K.Ahmad)
Chief Mechanical Engineer


(A.K.Rawal)
Chief Electrical Engineer


(Anand Kumar)
Chief Signal & Tele. Engineer


(U.K.Singh)
Chief Operations Manager


(Satish Kumar)
Principal Chief Engineer

NORTH CENTRAL RAILWAY

TRACK CERTIFICATE

Certified that track on the following sections of North Central Railway, the weakest portion of which as per details given under is to the required strength, which can safely permit for 'Operation of 3-Tier Sleeper(LWSCN) Non AC EOG LHB variants coaches fitted with FIAT bogies indicated against each section as under, subject to observance of all temporary and permanent speed restrictions (as mentioned in Annexure 'A') in force and/ or imposed from time to time on various accounts. All conditions stipulated in RDSO's speed certificate no. MC/LHB/COACH dt. 14.10.2011 for tracks is fulfilled except for C&M I (Vol.I) standards which are met with in about 60% length of track.

Line	Section		Kms		Rails		Sleepers			Ballast cushion (in mm) Total/Clean	Max. speed proposed (kmph)	Max. sectional speed existing in the section (kmph)
	From	To	From	To	Type	% of wear or year of laying	Type	Year of laying	Density			
DN	GZB	MGS	1428.50	677.28	52 Kg,90UTS	2002	PSC-5	1984	M+7	300/100	130	130
UP	MGS	GZB	677.28	1428.50	52 Kg,90UTS	1991	PSC-5	1991	M+7	300/100	130	130
DN	BINA	LAR	977.00	1037.81	52 Kg,72UTS	1987	PSC-5	2006	M+8	250/100	120	120
UP	LAR	BINA	1037.81	977.00	60Kg	2001	PSC-6	1990	M+8	250/100	120	120
DN	LAR	AGC	1037.81	1343.27	52 Kg,90UTS	2002	PSC-5	2007	M+8	250/100	130	130
UP	AGC	LAR	1343.27	1037.81	52 Kg,90UTS	1998	PSC-5	1996	M+8	300/100	130	130
DN	AGC	PWL	1343.27	1479.40	52Kg,90UTS	1998	PSC-5	1997	M+7	250/100	130	150
UP	PWL	AGC	1479.40	1343.27	52Kg,90UTS	1995	PSC-5	84-85	M+7	250/100	130	150

Countersigned

(Signature) 14/12/12

(S.N. Agrawal)
CTE

(Signature) 14/12
(S.K. Srivastava)
Dy.CE/TP

PERMANENT SPEED RESTRICTIONS (MGS-GZB) UP LINE

S.N	Between Station	Location		S.R	Proposed reason
		From	To		
MGS-ALD UP LINE					
1	KYT-CAR	701/23	702/5	100	Unusual vibration on bridge no. 479
2	KYT-CAR	704/5	705/19	100	Inadequate transition length on curves
3	PRE-JHG	725/27	725/29	50	Physical condition of Br. 503 unsatisfactory
4	MZP-BDL	742/23	743/27	100	Inadequate transition length on 0.50° curve
5	BEO-GAE	749/9	754/3	100	Inadequate transition length on curve (1.16° & 0.45°)
6	NYN-ALD	824/3	824/23	60	Non transitioned curve(1.25°) on approach of Bridge.
7	ALD-YD	824/1025	824/09	10	1 in 8.5 double slip diamond on loop line
ALD-CNB UP LINE					
8	ALD-SFG	826/03	827/07	75	1 in 12 T/out taking off from outside of 2° curve
9	SFG-BMU	828/5-7	829/3-5	75	1 in 12 T/out taking off from inside of 1.2° curve
10	CNBI-YD	1015/17	1016/DL-5	40	Negotiation 1 in 12 cross-over
11	CNBI-CNB	1016/DL-5	1018/DL-45	50	Poor visibility due to curve 2° to 3°
12	CNBI-CNB	1018/DL-45	1019/DL-01	30	Poor visibility and heavily populated area
13	CNBI-CNB	1019/S-0	1019/27	15	Due to 1 in 8.5 T/out in yard.
CNB-TDL UP LINE					
14	CNB-YD	P.F.No.2,3,4,5,6 & 7		10	Negotiating double slip diamond of 90R 1 in 10.
15	CNB-GOY	1019/10A	1019/17	65	Single slip diamond in curve no.90 in GMC yard.
16	JUHI-W	1021/09	1021/15	15	Negotiating Diamond Crossing for movement via North to DN yard
CNB-TDL UP LINE (3rd line)					
17	CNB-GOY	1019/23A	1019/37A	30	Negotiating 1 in 12 Cross over
18	CNB-GOY	1020/13A	1020/17A	50	Inadequate transition length on 4° curve
19	GOY-PNK	1025/15A	1025/29A	50	Inadequate transition length on 4° curve
20	GOY-PNK	1028/07	1028/09	30	New turnout
CNB-TDL UP LINE					
21	ETW-YD	1156/19	1156/25	110	Inadequate transition on 0.50° reverse curves
22	MNR-YD	1222/17	1222/25	120	1 in 12 T/out taking off from outside of transition portion of 0.50° curve
TDL-GZB UP LINE					
23	TDL-Yd	1247/29	1250/15-17	65	Double slip diamond xings on approach of 1.75° curve
24	TDL-Yd	1247/29	1247/33	15	Negotiating 1 in 8.5 diamond for loop line
25	TDL-Yd	1248/9	1248/39	30	Damaged washable apron
26	TDL-Yd	1249/17A	1249/35A	65	Inadequate transition length due to sharp reverse curve.
27	ALJN-Yd	1326/3	1326/7	100	Poor visibility due to 0.38° curve and heavily populated area

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[Signature]
14/11/20
Dy. CE/TP

PERMANENT SPEED RESTRICTIONS (GZB-MGS) DN LINE					
S.N	Between Station	Location		S.R	Proposed reason
		From	To		
GZB-TDL DOWN LINE					
1	ALJN	1327/4	1326/28	100	Poor visibility due to 0.35° curve and heavily populated area.
2	MTI-TDL	1250/16	1247/30	65	Double slip diamond xings on approach of curve
3	MTI-TDL	1248/40	1248/12	30	Weak track due to poor drainage
TDL-CNB DOWN LINE					
4	SKB-YD	1212/34	1212/26	110	1 in 12 & 1 in 8.5 T/outs taking off from inside & outside of transition portion of 0.25° curve .
5	SKB-YD	1211/26	1211/14	120	1 in 12 T/outs taking off from inside & outside of transition portion of 0.50° curve .
6	ETW-YD	1156/18	1156/14	110	Inadequate transition length on 0.63° reverse curves
7	PNK YD	1029/16	1029/06	110	T/outs taking off from inside/outside of 0.28° curve and inadequate transition length
TDL-CNB DOWN LINE (4th line)					
8	PNK-CNB	1026/30A	1019/28	75	Sectional speed
9	PNK-GOY	1026/32A	1026/30A	30	New turnout
10	GOY-CNB	1020/16A	1019/2A	50	Inadequate transition length on 4° curve
TDL-CNB DOWN LINE					
11	JUHI/E	1019/20	1019/12	65	Diamond Xing on curve as per IRPWM para 416.
12	JUHI/C	1020/26	1020/20	15	South line use for down traffic.
13	STN/CNB	1019/2	1019/4	15	Due to X-ing for North line to South line.
14	CNB Yd	P.F. No. 1,2,3,4,5&6		10	1 in 10 double slip diamond
15	JUHI/W	1021/18	1021/10	10	Negotiating double slip diamond crossing.
CNB-ALD DOWN LINE					
16	CNB-CNBI	1019/DL-2	1018/DL-46	30	Poor visibility & heavily populated area
17	CNB-CNBI	1018/DL-46	1015/DL-42	50	Poor visibility due to curve 2° to 3°
18	CNB-CNBI	1015/DL-42	1015/12	40	Negotiating 1 in 12 cross-over.
19	SFG Yard	830/0	829/26	120	Inadequate transition length between reverse curves.
20	SFG Yard	829/6	828/6	110	1 in 12 T/out taking off from inside & outside of 1.34° curve.
21	SFG-ALD	827/8	826/06	85	1 in 12 T/outs taking off from outside of 2° curve
22	ALD-Yard	825/30	825/06	30	Damaged washable apron .
23	ALD-Yard	824/24	824/4	60	Inadequate transition length on 1.25° curve
ALD-MGS DOWN LINE					
24	ALD-NYN	824/14	824/10	10	1 in 8.5 double slip diamond on loop line
25	NYN-COI	816/38	815/38	125	1 in 12 T/out taking off from inside/ out side of 1.05° curve.
26	MZP-Yard	736/16	735/12	90	Non transitioned curves of 1.5° & 1°
27	PRE-JHG	725/30	725/28	50	Physical condition of Br. 503 unsatisfactory
28	DAP-CAR	705/20	704/20	100	Inadequate transition length of curves
29	CAR-Yard	705/18	705/04	65	Inadequate transition length between two reverse curves of 0.50° and 1 in 8.5 double slip diamond
30	CAR-Yard	705/10	705/08	10	Negotiating 1 in 8.5 diamond crossing for loop line
31	CAR-KYT	702/6	701/24	100	Unusual vibration on bridge no. 479

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PERMANENT SPEED RESTRICTION (BINA-AGC) UP LINE

Sr. No.	Between station	Location		Speed in kmph	Proposed Reason
		From	To		
AGRA-JHANSI SECTION					
1	BHA-JJ	1332/09	1329/25	110	2.2° to 2.3° Curves.
2	BHA-JJ	1332/23	1332/11	90	1 in 12 T/outs laid in contrary flexure on 2° curve.
3	BHA-JJ	1322/27	1320/17	110	2° to 2.3° Curves.
4	MIA-JJ	1314/23	1313/9	110	2° Curve.
5	MIA-DHO	1293/0	1292/15	120	1.96° Curve.
6	DHO-GHER	1290/1	1289/27	80	1 in 8½ Turnouts laid in cntrary flexure on 2.52° curve.
7	DHO-HET	1285/01	1283/37	70	Bad formation
8	GFR-HET	1283/37	1281/25	90	Bad formation
9	GFR-HET	1281/25	1277/15	110	2.5° Curve.
10	HET-MRA	1268/47	1267/27	120	2° Curve.
11	SQ-NUB	1253/15	1253/5	100	1 in 12 Turnouts laid in cntrary flexure on 1° curve.
12	RRU-BLNR	1233/33	1233/13	120	2° Curve.
13	BLNR-GWL	1229/0	1228/11	120	2° curve
14	GWL YD	1224/33	1223/31	50	Turnouts from 3.28° curve
15	GWL-STLI	1223/31	1220/15	100	3° Curves .
16	STLI-SLV	1212/47	1211/C7	90	3° curve
17	STLI-SLV	1211/C7	1211/11	70	5° curve.
18	STLI-SLV	1211/11	1208/37	80	4° curve.
19	SLV-ARI	1208/37	1207/19	90	3° Curve.
20	SLV-ARI	1207/19	1206/17	120	2° curve.
21	SOR-DAA	1162/3	1155/07	90	3°-3.5° Compound curves
22	DAA-KRQ	1142/0	1141/15	120	2.1° curves
23	JHS YD	1128/16	1126/12	50	Std.-I Interlocking
24	JHS YD	1127/19	1127/17	15	1 in 8.5 turnout from UP M/L to back road.
25	JHS YD	1127/07	1127/05	30	1 in 12 turnout from MKP branch line to UP Main line.
JHANSI-BINA SECTION					
26	JHS-BJI	1125/33	1125/9	50	Std.-I Interlocking
27	JHS-BJI	1124/13	1124/11	50	Std.-I Interlocking
28	JHS-BJI	1122/21	1122/15	120	2.12° curve.
29	BZY-MZX	1087/12	1086/15	100	2.69° curve.
30	BZY-MZX	1085/15	1084/25	100	2.84° curve.
31	DWA-LAR	1039/00	1038/25	115	1.75° curve.

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PERMANENT SPEED RESTRICTION (BINA-AGC) DN LINE

Sr. No.	Between station	Location		Speed in kmph	Proposed Reason
		From	To		
BINA-JHANSI SECTION					
1	AGD-KOA	991/20	992/02	110	2 degree curve Inadequate transition length
2	LAR-DWA	1038/18	1039/12	105	1 in 12 T/Outs taking off from outside of 1.5° curve.
3	MZY-BZY	1084/15	1088/0	105	2.5° Curves.
4	BJI-JHS	1122/06	1122/22	115	2.25° Curve.
5	BJI-JHS	1124/12	1124/26	50	Std.-I Interlocking
6	BJI-JHS	1125/12	1125/34	50	Std.-I Interlocking
7	JHS Yd	1126/12	1128/16	50	Std.-I Interlocking
8	JHS Yd (CSTM)	1127/18	1127/20	15	1 in 8½ Turnouts from DN M/L to back road
JHANSI-AGRA SECTION					
9	KRQ-DAA	1141/16	1142/2	115	2.17° Curve.
10	DAA-SOR	1155/06	1158/10	115	2.1° Curve.
11	KTRA-DBA	1176/12	1177/8	115	2.2° Curve.
12	ARI-SLV-STLI	1203/22	1211/38	90	3°- 3.45° curve
13	SLV-STLI	1212/04	1212/28	120	2° Curve.
14	STLI-GWL	1220/14	1223/36	100	3° Curves .
15	STLI-GWL	1223/36	1224/34	50	Turnouts from 3° curve
16	GWL-BLNR	1226/24	1229/00	120	2.1° curve.
17	BLNR-RRU	1233/24	1233/26	120	2.1° curve.
18	BLNR-RRU	1251/0	1251/22	120	2.1° Curve.
19	NUB-SANK	1253/4	1253/14	100	1 in 12 Turnouts laid in contrary flexure on 1° curve.
20	MRA-HET	1266/16	1269/00	120	2.1° curve
21	HET-GFR	1277/8	1282/24	110	1.26° curves
22	GHER-DHO	1284/26	1285/4	120	2° Curve.
23	GHER-DHO	1289/26	1290/04	75	1 in 12 turnout laid in similar flexure on 2.31° curve.
24	DHO-MIA	1292/18	1293/2	115	2° Curve.
25	MIA-JJ	1307/32	1308/18	110	2.1° Curve.
26	MIA-JJ	1313/10	1314/0	120	2.1° Curve.
27	JJ-BHA	1320/8	1323/2	120	2° curve.
28	JJ-BHA	1329/26	1332/12	110	2° curve.
29	JJ-BHA	1332/12	1332/22	75	1 in 16 Turnouts laid in similar flexure on 2° curve.

CTE

Dy. CE/TP

**NORTH CENTRAL RAILWAY
BRIDGE ENGINEER'S CERTIFICATE**

Based on RDSO's speed certificate no. MC/LHB/Coach dated 14.10.2011, certified that bridges on the sections given below are having minimum strength of super structure as indicated against the sections as per revised Bridge Rules -1964 and are safe for operation of 3-Tier Sleeper (LWSCN) Non AC EOG LHB variant coaches fitted with FIAT bogies, up to the maximum speed indicated against the sections, subject to all temporary & permanent speed restrictions already in force and those that may be imposed from time to time.

S. N.	Section		Line	KM		% Strength	Max. Speed
	From	To		From	To		
1.	Mughalsarai	Ghaziabad	UP/DN	677.28	1428.50	100% RBG	130 Kmph
2.	Palwal	Lalitpur	UP/DN	1479.40	1037.81	100% BGML	130 Kmph
3.	Lalitpur	Bina	UP/DN	1037.81	977.00	100% BGML	120 Kmph

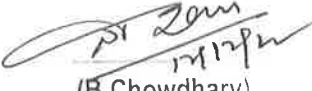
Sub structure of all the bridges on the sections given above are in satisfactory condition and are safe for operation of 3-Tier Sleeper (LWSCN) Non AC EOG LHB variant coaches fitted with FIAT bogies, up to the proposed speeds conforming to the provisions of revised IRS Bridge Sub structure and Foundation code.


This clearance is subject to the following parameters of 3-Tier Sleeper Non AC EOG LHB coach-

1.	Maximum axle load	16.25t
2.	Maximum Bracking Force	5.8t
3.	CG height above Rail Level	Not exceeding 1830mm.

The specific restrictions are applicable as mentioned in relevant speed certificates of hauling single/multiple locomotives issued by R.D.S.O.

Countersigned


(B. Chowdhary)
Chief Bridge Engineer


(Sachin Verma)
Dy.CE/Bridge/HQ
12-12-12