EAST COAST RAILWAY

Office of the
Principal Chief Engineer
North Block, Rail Sadan,
Chandrasekharpur,
Bhubaneswar- 751017.

No. W1/162/Drg/ Policy/ 3960 Dt. 02.07.2024.

To
The CAO/Con/BBS,
CPM/RVNL/I, II/BBS,
CPM/RVNL/I & II/WAT,
CPM/RVNL/Raipur,
Sr.DEN(Co-ord)/ KUR, WAT & SBP.

Sub: **Revised Check list for Processing of Yard plan & L-Section.**

Ref: : (i) This office Lr.No.W.1/162/Drg.Policy/3108 dtd 21.05.2024.

(ii) This office Lr.No.W.1/162/Drg.Policy/645 dtd 31.01.2024.

The check list for preparation of Yard plan & L-Section has already been circulated vide this office letter under reference above. Now, one point has been inserted in revised checklist of yard plan i.e Sl No.61 as per Para 524 of IRPWM. Now, the check list has been revised & revised check list is to be followed and the same to be signed by concerned Engineering officials of Executing Agencies i.e. Division/Construction/RVNL to be attached with the drawing while sending to HQ for approval. ESPs received without check list will not be entertained at HQ level.

This revised checklist superseded the previous revised check list under reference (i) above.

This has the approval of CPDE/BBS.

Encl: Revised Checklist for preparation of Yard plan (Sl.No 1 to 61 & Annexure-A,B,C & D)
& L-Section (Sl.No. 1 to 50).(Attached in e-Mail)

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Dy. Chief Engineer(Planning)
For Chief Planning & Design Engineer.

Copy to:

(i)Secy to PCE for information of PCE please.

(ii) CPDE,CTE,CBE,CGE,CE/SD,CE/TM,CE/RSW&BR for information of please.

CHECK LIST FOR PREPARATION OF YARD PLANS

S. No.	Description		
1	Has Name of Work mentioned on the ESP?		Yes/No/NA
2	Has the ESP been prepared in e DAS		Yes/No/NA
3	Type of work: Works Programme/Deposit Work/ Private		Yes/No/NA
4	In case of work sanctioned as per Works Programme of Railway:		
	a	Plan Head	
	b	Project ID	
	c	Sanctioning Authority	
	d	Year of Sanction	
	e	Cost of Sanctioned work	
	f	Executing agency	
4	Explanatory note on scope of work		
	i	Scope as proposed	
	ii	Scope as per sanctioned including deletion remarks, if any	
	iii	Scope as represented in ESP	
	iv	Remarks to explain deviation from the scope of sanctioned work	
5	In case of a unsanctioned work, has the administrative approval of the competent authority been obtained? If Yes, give reference and endorse a copy of justification along with the abstract estimated cost and indicate how the funds required are proposed to be arranged.		Yes/No/NA
6	In case of Deposit work/ Private siding:		
	a	Name of approved consultant and validity of approval of the consultant.	
	b	Date of in-principle approval	
	c	Date of submission of 1% survey charges with proof	
	d	Date of DPR approval by CTPM	
	e	Date of submission of balance 1% survey charges with proof	
	f	Allocation head in which survey charges are available (Along with certificate from finance department indicating amount and allocation head)	
	g	Whether conditions at the time of in principle approval, DPR approval, issue of RTC etc have been complied with.	
	h	Explanatory note on scope of work:	
		(i) As approved in DPR	
		(ii) Remarks to explain deviation from scope of approved work	
	i	Whether the stipulations of the policy frame work under which the siding/facility has to be constructed has been examined and are complied with.	
	j	Name of Executing agency	
7	Has the existing layout and feasibility of new proposal been checked at site and a certificate is recorded on the plan.		Yes/No/NA
8	Have all the lines been numbered and designated for identification		Yes/No/NA

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	and reference with direction of traffic (UP and DN line) as per Engg. Code para 468?	
9	Has the plan been prepared in scale of 1 in 1000 as per Engg. Code para 468?	Yes/No/NA
10	Has spelling of stations names with their KM and class been shown as per Working Timetable/System map and IRWM para 906(a)iii?	Yes/No/NA
11	Has the distance between East Coast Railway boundary to centre line of main track at an every offset with chainage as per IRWM para 906(a) v been shown?	Yes/No/NA
12	Does the plan bear the names of officers concerned along with their signatures with dates, month and year as per IRWM Para 904 (a) ?	Yes/No/NA
13	Has the reference number of previously HQ approved plan on which the existing layout is based, been mentioned on the plan?	Yes/No/NA
14	Has the direction of flow of stream, pipe lines, sullage or sewer drains been indicated by arrow.	Yes/No/NA
15	Has the gradient posts with chainages upto 2.5 km in rear of outermost point on either side as per signal Engg. Manual part-1 para 8.6.2 (v) been shown?	Yes/No/NA
16	Have the type of platforms (i.e passenger or goods) with length and width and their heights above rail level as per IRWM para 906(a)xiv been shown ?	Yes/No/NA
17	Platform, Structures like station buildings, ROBs etc should be hatched in different patterns for easy identification.	Yes/No/NA
18	Have the chainage of all points and crossings, FM's Traps and Dead Ends as per IRWM para 906(a)xiv been shown in the plan?	Yes/No/NA
19	Have the complete details of curves such as curve number, deflection angle, degree of curve, radius of curve, tangent length, curve length, super elevation, transition length and speed in KMPH as per IRWM Para 906(a)vii been written on the plan?	Yes/No/NA
20	Have the LC gate number, class and its Kilometerage/ Chainages , interlocked or non interlocked have been shown?	Yes/No/NA
21	Have the names of nearest junctions or terminal stations on either sides as per IRWM para 906 (a) ii been shown in the plan?	Yes/No/NA
22	Have the names of adjoining stations along with their class and KM on either sides of the station been shown?	Yes/No/NA
23	Has the kilometerage of the centre line of station building been indicated in decimals as per working timetable and system map?	Yes/No/NA
24	Has the temples, mosques and graves, roads and footpaths with name of towns or villages they lead to been shown as per IRWM para no. 906(a)x?	Yes/No/NA
25	Has the position and block numbers of buildings been shown as per IRWM para No. 906 (a) xi?	Yes/No/NA
26	Has the road crossing with their class and location, road over bridges and under bridges as per IRWM para No. 906(a)xv been shown?	Yes/No/NA
27	Has the infringements of standard dimensions, in tabular form, if any been shown as per IRWM para No. 906(a)xvi?	Yes/No/NA

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28	Has the plan been got signed by the party in case of deposit work?	Yes/No/NA
29	Have the notes regarding existing, proposed, work to be dismantled and other relevant been written on the plan as follows?:-Existing work in black, proposed work in red, work to be dismantled in thin dotted black and future work in dotted red.	Yes/No/NA
30	Have the works previously got approved by the Headquarters office but not executed till the time been incorporated on the tracing plans in different colours?	Yes/No/NA
31	Have the CSR of all the lines including siding been written on the plan? (where to where) As per IRWM para 906 (a) xiv	Yes/No/NA
32	Has the complete description of the bridges within station limit along with their chainage as per IRWM para 906 (c) been written on the plan?	Yes/No/NA
33	Provision of Track machine siding in projects for new lines, doubling, gauge conversion and yard remodeling should not be less than **300m** as per RB letter no. 2007/track-III/TK/24 vol II dated 14.3.2012.	Yes/No/NA
34	Has provisions of Siding for Track machine as per IRTMM para 8.4.4 **(30 km apart)** in projects of new lines, doubling, gauge conversion and yard remodeling is done?	Yes/No/NA
35	Has provision of Passenger Amenities at stations as per RB letter no. 2018/LM(PA)/03/06 dated 09.04.2018 is followed?	Yes/No/NA
36	If the section is under sanctioned electrified work, has the ESP been routed through concerned Executing Agency of Electrification.	Yes/No/NA
37	Further to point no 37 above, has the signature of Sr. DEE/TRD concerned been obtained on the plan?	Yes/No/NA
38	Whether type of Points & Crossings i.e. 1 in 8.5, 12, 16 and rail section with type of switches(straight/curved) are mentioned ?	Yes/No/NA
39	Whether gradients are compensated in curve portion and ruling gradient is maintained ?	Yes/No/NA
40	Whether track centre distance is kept as per SOD & latest guidelines	Yes/No/NA
41(a)	Is 1 in 8.5 turnout proposed on passenger line.	Yes/No
(b)	If yes (then reason for the same to be given) Approval of PCE taken or not.	Yes/No
42(a)	Is there any turnout of 1 in 8.5 with curved switch on running lines with passenger traffic from outside of a curve upto 5°.	Yes/No
(b)	If yes, then the detail of exceptional circumstances mentioned that why it is not possible to provide 1 in 12 turnout. Approval of PCE taken or not.	Yes/No
43	Is 1 in 12 turnout taking off from curves.	Yes/No
44(a)	Is there turnout with 1 in 12 or flatter crossing taking off from curve whose lead curve radius as well as radius of main line is less than 350m.	Yes / No
(b)	If yes, whether PCE approval obtained for laying of 1 in 12 or flatter turnout with curved switches inside of curve main line whose resultant lead curve radius not less than 290m.	Yes / No
45	Is there any points & crossing within 30 m of grade change	Yes/No/NA

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46	Is reason recorded whenever proposing gradients steeper than 1 in 1200 and upto 1 in 400 in yards.	Yes/No/NA
47	If revision of ESP, then reason for deviation with proper justification as per annexure –A* are attached.	Yes / No
48	Whether regrading (either lowering or lifting) has been proposed, if yes, then action plan for regrading mentioned in ESP.	Yes / No
49	For new yards in new line projects, if yard gradient steeper than 1 in 1200 proposed. If yes, approval of GM obtained. (Ref: IRSOD, Chapter –II, Sl. no.-2,Note no. - b)	Yes/No/NA
50	Is there any siding line joining a passenger line steeper than 1 in 100. If yes, approval of Railway Board taken. (Ref: IRSOD, Chapter –II, Sl. no.-2,Note no. - c)	Yes / No
51	For existing yard (Ref: IRSOD, Chapter –II, Sl. no.-2,Note no. - d)	
(i)	CRS condonation taken for gradient steeper than 1 in 400 (0.25%) and up to 1 in 100(1.0%).	Yes/No/NA
(ii)	Railway Board condonation taken through CCRS for gradient steeper than 1 in 100(1.0%).	Yes/No/NA
52	For new yard. (Ref: IRSOD, Chapter –II, Sl. no.-2,Note no. - d)	
(i)	CRS condonation taken for gradient steeper than 1 in 400 (0.25%) and up to 1 in 260(0.38%).	Yes/No/NA
(ii)	Railway Board condonation taken through CCRS for gradient steeper than 1 in 260 (0.38%).	Yes/No/NA
53	Is there any turnout taking off from transition portion of main line curve. If yes, approval of CTE taken.(Ref: IRPWM para no. 410)	Yes/No/NA
54	Is there any change of cant between points 18m outside the toe of switch and the nose of the crossing.(Ref: IRSOD, Chapter –II, Sl. no.-21,Note)	Yes / No
55	Condonation details mentioned in ESP.	Yes/No/NA
56(a)	Is there any bridge/level crossing exists within 30m. distance ahead of Dead end.	Yes / No
(b)	If yes, Is the bridge extension proposed & to have 30m. clear safe distance ahead of Dead end.	Yes / No
57	Whether Layout calculation sheet PDF & CAD file attached ? Layout calculation to be submitted with Annexure-B	Yes / No
58	Whether X-OVER Formation Level calculation sheet attached as per Annexure –C ?	Yes / No
59	Is there any point and DS provided within the fouling zone ?	Yes / No
60	Whether Curve calculation sheet attached ? Curve calculation to be submitted with Annexure-D	Yes / No
61	Whether **Transition length** provided are sufficient as per para No.524 of IRPWN for all Curves.	Yes / No

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***Annexure-A** **Deviation Details**

Data as per earlier approved plan	Data as per proposed plan	Reason for deviation/Change

Annexure-B **X-over Over all length**

Sl. No	From Line	To Line	CH: From	CH: To	Type of Turn out	FL of Turnout of 1st Line	FL of Turnout of 2nd Line	Grade of 1st Line	Grade of 2nd Line	Length of X-over as per Calculation	Remarks

***Annexure-C** **X-over Formation level Details**

Sl.No	Chainage of SRJ	SRJ location (Line No.)	Grade	Proposed FL at SRJ	Proposed FL at Opposite line	Difference of FL	Remarks
1							

***Annexure-D** **Curve Details**

Sl.No	Curve No.	CH: TPTC1	CH: TPCC1/ TP1	CH: TPCC2/ TP2	CH: TPTC2	Radius of curve	SE	Speed on Curve	Remarks

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Revised Check List for approval of L-section of Doubling/New line/3rd line/4th line project .

Sl. No.	Item	Remarks
1	***TITLES AND NUMBERING OF DRAWINGS***	
a)	Whether 170mmX65mm with basic information, like name of Railway, name of Division / Construction organization/ RVNL, name of work, drawing no, reference to sanctioned particulars (pink book items), dated initials of the concerned officials, alteration if any, scale of drawing are shown ? Ref: IRWM para 904 (a).	Yes / No
2	Whether all the signature on tracing are with indelible ink and date? Ref: IRWM para 904 (e).	Yes / No
3	Whether the true North point is shown? Ref: IRWM para 906 (a) (1).	Yes / No
4	Whether spelling of station names with Km. and chainage are shown as per working time table?	Yes / No
5	Whether direction of traffic Up/Dn line is shown as per working time table?	Yes / No
6	Whether scale of the plan- Horizontal = 1 : 5000, Vertical = 1 : 500 is shown ? Ref: Para 452 of Engg code & para no. 657(b) of IRPWM 2020.	Yes / No
7	Whether bench marks are shown? Ref: Para 453 of Engg code.	Yes / No
8(i)	Whether the section is showing the formation level by a red line, the gradients are figured, and the height of formation above MSL entered at each change of gradient?	Yes / No
(ii)	Whether the position of bridges, with size and spans, level crossings with their classification and position of each station with it's name and distance from the fixed point are shown?	Yes / No
(iii)	Whether the Kilometerage from the fixed point and figured at every kilometer are shown? Ref: Para 451 of Engg. Code.	Yes / No
9	Whether the datum used is as per MSL? Ref: Para 446 of Engg. Code.	Yes / No
10	Whether in the case of a junction with an existing Railway, the plan has been shown the existing line for not less than one km on each side of the proposed junction? Ref: Para 457 of Engg. Code.	Yes / No
11	Whether for the purpose of new railway line & for the accommodation for the public, all new works proposed are marked, also all alteration, diversion, protection work & proposed in connection with existing railways, roads, rivers, cannels & tanks? Ref: Para 456 of Engg. Code.	Yes / No
12	Whether the formation levels are shown by red line and ground line being black? Ref: Para 458 of Engg. Code	Yes / No
13	Whether height of ground above MSL, height of formation above MSL are given in meters to two places of decimals at every 20 mts. and vertical lines are shown in blue ? Ref: Para 459 of Engg. Code.	Yes / No

14(i)	Whether gradients are entered in a plain and conspicuous manner?	Yes / No
(ii)	Whether at each change of gradient an ordinate are drawn in red upto formation level and height of formation noted to two places of decimals where a change of gradient occurs at any point other than at the 20 mts ?	Yes / No
(iii)	Whether the chainage of changing point are noted? Ref: Para 461 of Engg. Code.	Yes / No
(iv)	Whether change of grades within 30m of any points or crossings? [Ref. IRSOD para no. 2, note (f) of Chapter-II]	Yes / No
15	**Details of curves:**	
i)	Whether the list of **existing curves**, showing the details like degree of curve, radius, total curve length, actual cant, max. Permissible speed on the curve, versine, transition length etc. provided are shown ?	Yes / No
ii)	Whether the list of **proposed curves** showing the details like degree of curves, radius, total curve length(TCL), circular curve length(CCL), SE provided, permitted speed on the curve, versine provided, transition length etc proposed are shown? (Curve calculation to be separately enclosed)	Yes / No
iii)	Whether the details such as tangent points of all (TPCCs & TPTCs) curves, general description of soil, position of bridges, level crossings, diverted roads/ canals etc are shown? Ref: Para 462 of Engg. Code.	
iv)	Whether location of PSR's are identified & highlighted and the reasons for such PSR's are indicated in the letter? (Curve/Pts & Xing/Visibility)	Yes / No
v)	Whether vertical curves are provided as per para 417 of IRPWM 2020? List of curves and calculations to be enclosed.	Yes / No
vi)	Is there any change of cant between points 20m outside the toe of switch & the nose of the crossings? (Ref. para no. 410 of IRPWM 2020)	Yes / No
vii)	Is there any change of grade located over the transition length of curve? [Ref. para no. 405(7) of IRPWM 2020]	Yes / No
viii)	Is the length of transition so calculated rounded off to the next higher value in multiple of 10m? [Ref. para no. 405(1) of IRPWM 2020]	Yes / No
ix)	Is the calculated cant/SE rounded off in the multiple of 5mm? [Ref. para no. 404(1)(c) of IRPWM 2020]	Yes / No
x)	Whether a straight track with a minimum 50m length is kept in between two transition of reverse curve? [Ref.-Para 405(9)(b) of IRPWM 2020].	Yes / No
16	Whether cuttings are graded with special reference to efficient drainage? Ref: Para 466 of Engg. Code.	Yes / No
17	**In the notes of the drawings/L-section the following items to be included**	
i)	Whether ruling gradient is mentioned?	Yes / No
ii)	Whether curves are grade compensated or not? [Ref. para no. 416 of IRPWM 2020]	Yes / No
iii)	Whether Track Structure is as per IRPWM 2020 guidelines? [Ref.- For Rails para 205, for Sleepers para 209(2) & for Ballast para 212(2) of IRPWM 2020].	Yes / No
(iv)	Whether classification of route and maximum permissible speed for	Yes / No

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	this project/line are mentioned? [Ref. para no. 201 of IRPWM 2020]	
v)	Whether mentioned for provision of vertical curves?	Yes / No
(vi)	Whether sanction particulars (Latest Pink Book item) are given?	Yes / No
vii)	Whether minimum track centre considered for this project along with reference are given?	Yes / No
viii)	Whether type of axle load considered for design of the project is mentioned? [Track structure for operation of 25T Axle Load(speed upto 100kmph) suggested in RB letter no. 2018/CE-II/TS/25T dt 14.03.2018 is to be followed]	Yes / No
(ix)	Whether formation work including thickness of blanketing confirm to "Comprehensive Guidelines and specifications for Railway formation, Specification no. RDSO/2020/GE:IRS-0004, Sept.-2020" ? (Ref.: RDSO's letter no. GE/GEN/185-Vol-I dt.17.09.2020)	Yes / No
x)	Whether formation width are mentioned or not? [Ref. IRPWM 2020 para no. 212(1)& IRSOD para-16 & 17 of Sch-1, CH-1]	Yes / No
18	Whether the chainage of station limits and the top point chainages in the stations are given?	Yes / No
19	In case of station yards, the gradient proposed shall be 1 in 1200 or flatter. In case deviation of this, whether the detail reasons are indicated in the letter? [Ref. para-2 note(b) of CH-II of IRSOD]	Yes / No
20	Whether cut and cover location & their chainages if any, are shown in case of doublings?	Yes / No
21	Whether land boundary details which are parallel to the alignment are shown?	Yes / No
22	Whether the L-section sheet, at each end repeated from the adjoining sheets are shown? Ref: Para 452 of Engg. Code.	Yes / No
23	Whether the track centre between existing & proposed line are shown at every 50 mts interval in case of doubling/multiple lines?	Yes / No
24	Whether proposed land acquisition locations and extend are shown?	Yes / No
25	The Kilometerage should be reckoned from the same fixed point. This fixed point should be at that end which is in the direction of nearest sea point. If the line takes off from an existing Railway Station, the zero point should be fixed at the centre of the existing station yard. Each sheet should be plotted in the direction of the through km so that kilometer may be read from left to right. Whether these are indicated or not ? Ref: Para 445 of Engg. Code	Yes / No
26	In case of doubling, the comparison table of existing line and proposed line at the locations with respect to track centre, gradient, grade compensation, LWR/CWR, curve details, sectional speed, transition length, approach yard gradient, track structure to 25T or not, existing PSRs, new total PSRs in proposed L-section, LC removals etc, is enclosed?	Yes / No
27	If revised/alteration of L-Section is proposed, the reason for revision/ alteration is to be mentioned clearly in the drawing and a deviation statement w.r.t approved L-section should be enclosed with the revised proposal.	Yes / No
28	Following details are to be enclosed with L-section: i) Gradient list. ii) Horizontal curve calculation sheets (**as per enclosed Format**) with curve abstract list. iii) List of Vertical curves with calculation sheets.	 Yes / No Yes / No Yes / No

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	iv) Bridge list with span with type of roller/without roller used.	Yes / No
29	**In Case of Doubling**	
i)	Whether the adequacy of track centre at major bridge location to avoid infringement to existing foundation are shown?	Yes / No
ii)	Whether the adequacy of track centre at minor bridge location to avoid infringement to existing foundation are shown?	Yes / No
iii)	Whether the spans/waterways provided as per the existing bridges or not ?	Yes / No
30	**In case of New lines**	
	Whether the bridge span provided are as per the detailed calculation or not?	Yes / No
	For L C's	
31	**New line:**	
(i)	There is no level crossing on the proposed line.	Yes / No
(ii)	Level Crossings are being provided on the proposed line and is certified that: a. Project has been sanctioned/under sanction on socio economic grounds with Rte of Return less than 10%. b. Formation level does not permit the construction of RUB/ROB without raising the formation level specifically to accommodate them and with no extra land acquisition. c.Proposed level crossing are interlocked.	Yes / Not applicable
32	**Doubling/3rd/4th Line:**	
(i)	Status of sanction of works for elimination of LC has been indicated.	Yes / No
(ii)	All Level crossings have been planned for elimination, chargeable to project Estimate.	Yes / No
(iii)	Is there any Level crossing is not feasible to eliminate by LHS or RUB, the reason for retention shall be indicated.	Yes / Not applicable
	For Bridges	**Remarks**
33	Whether direction of flow of bridges have been shown in alignment plan?	Yes/No
34	If existing bridge required to be extended, then whether it has been ensured that the load of proposed track is not shared by existing Bridge? (If load from new track comes on existing bridge, then it's strength should be checked and if existing bridge is unable to share the extra load then necessary strengthening and or replacement of existing bridge should be planned)	Yes/No
35	Whether water ways of the proposed bridges is not less than that of the existing railway bridges subject to minimum water way as per the practice in vogue? (Adequacy of existing water way to be ascertained from divisional engineering officers before approval GAD)	Yes/No
36	Whether the minimum head room of 1.20 m for all Bridges has been kept as per correction slip no. 25 to IRBM?	Yes/No
37	Whether minimum clear span of 1.00 m for all Bridges has been kept as per correction slip no. 25 to IRBM.	Yes/No

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38	Whether proposed and existing Bridge wise of proposed and existing span, type of proposed bridges has been furnished in the L-section?	Yes/No
39	Whether it has been ensured that extension of each Existing Bridge is proposed in front of existing Bridge (in alignment)?	Yes/No
40	Whether minimum loading standard of the bridges is 25t axle load-2008 & is mentioned in L-section.	Yes/No
41	Whether efforts have been made to configure the Railway Bridges in such a way that all the relevant standard RDSO drawings are adopted?	Yes/No
42	Whether formation levels at Bridge portion match with the proposed L-section? If not, Height difference of existing and proposed formation to be mentioned.	Yes/No
43	Whether steel girders have been proposed for the bridges having span more than 24.40 m?	Yes/No
44	Whether RDSO's standard spans have been proposed for ROBs?	Yes/No
45	The proposed span of proposed Bridges/ROBs/RUBs/LHSs as mentioned in L-section is tentative. L-section is not an authority to follow the arrangement. GADs should be got approved duly following relevant guidelines before commencement of work.	Yes/No
46	Whether any stone slab bridge getting sandwiched between 3rd & 4th line? If yes, action to rebuild before construction of new bridge for 3rd & 4th line?	Yes/No
47	Whether PSC girder of span 12.20m avoided as it is not having pathway provisions.	Yes/No
48	Whether RCC box is avoided in major bridge. Whether in exceptional case in minor bridge in non erodible strata, RCC box is provided and reasons mentioned.	Yes/No
49	Whether LHS proposed confirms to Rly. Bd's guideline.	Yes/No
50	Whether adequacy of track centre (to be increased) checked to avoid infringement of existing foundation.	Yes/No