GOVERNMENT OF INDIA MINISTRY OF RAILWYS (RAILWAY BOARD)

No. F(X)II/2022/PD/1

New Delhi, dated.08.02.2023

General Managers, All Indian Railways.

Sub: Productivity Test

Please refer to Board's letter of even number dated 31.03.2022 followed by reminder dated 17.10.2022 wherein it was requested to submit the Productivity Test reports undertaken for the Railway projects by the Zonal Railways.

During a recent EBR meeting, NITI Aayog has also asked for the productivity test. It is therefore requested that results of Productivity Tests already conducted should be submitted immediately and remaining productivity tests should be completed at the earliest.

DA: Enclosed.

(Ajeet Kumar Srivastava)
Executive Director, Finance (Exp.)
(Railway Board)

Copy for information to:

PFAs, All Zonal Railways.

GOVERNMENT OF INDIA MINISTRY OF RAILWAYS (RAILWAY BOARD)

No. F(X)II/2022/PD/1

New Delhi, dated 31.03.2022.

General Manager, Central Railway, Mumbai.

Sub: Productivity Test.

Ref: i) Board's Letter No.F(X)II/2005/PD/1 (Reports) dated 15.12.2014, 31.08.2015, 14.10.2015 and 08.09.2021.

ii) Board's letter No.2018/F(X)II/PD/NFR/14 dated 18/01/2019.

In terms of provisions contained in Para 243-248 of Indian Railways Finance Code Vol-1 (extracts enclosed), all major works undertaken with the objective of increasing earnings or reducing expenditure or both have to be subjected to Productivity Tests/Reviews in order to determine whether the financial returns anticipated at the time of sanction have actually been realized or not. This exercise has to be carried out jointly by the Operating, Commercial, Engineering, Accounts and other concerned departments of Zonal Railways. However, it has been observed that the Zonal Railways have not been regular in carrying out and submitting their respective reports to Railway Board.

- 2. It is for favour of your attention that the Productivity Tests should be invariably undertaken for all those projects where this test is due and the reports of such tests should be submitted to Railway Board on time.
- 3. A list of works, which have been completed in last 10 (ten) years, has been obtained from IRPSM and **annexed** to this letter. While the Productivity Test has to be done for all major works, Central Railway may conduct the Productivity Tests for the works mentioned in the list enclosed, to start with.

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रेख का अस्ति। असुरे उन्हेट्टा के सहित जारी Issue with Enclosure भगानर

Page 1 of O

- 4. Railway is requested to undertake Productivity Test of the above works as per provisions mentioned in para 1 of the letter *ibid* and send the report to this office at the earliest.
- 5. This issues with the approval of Board (MF and CRB & CEO).

DA: As above.

(Mohit Sinha)3

Additional Member Finance

No. F(X)II/2022/PD/1

New Delhi, dated 3 .03.2022.

Copy to: PFA, Central Railway, Mumbai for information and necessary action.

(Mohit Sinha) Additional Member Finance

Copy for information to:

- 1. EDCC for information of CRB & CEO;
- 2. M(O&BD)
- 3. M.I.
- 4. M.F.

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Note: The preparation of financial justification as contemplated in this paragraph is not necessary for condemning rolling stock in the following cases:-

- Overaged stock due to be replaced by virtue of their age but condemned before replacement.
- ii) Under or overage stock involved in accidents and certified to be irrepairable (not included under the category of "beyond economical repairs").
- Non I.R.S. type coaches and wagons of inherently weak design proposed to be condemned on condition basis whether under or overage.
- 240 Example are given in Annexure 'G' illustrating the method of financial justification to be adopted in the case of replacement, reconditioning or abandonment of existing assets. The data used in the illustrations are hypothetical and the methods adopted are not to be regarded as exhaustive or as precluding the use of other methods that may be found to be more appropriate. The D.C.F. method can be conveniently used in some cases as has been shown in Example (1) of Annexure 'G'.
- 241 Second-hand Value- The second-hand value of an asset is what it is presently worth and has often to be distinguished from its scrap value. For purposes of financial justification of transfer, purchase or sales, the second-hand value of assets may, except in certain cases (e.g. rails, locomotives, boilers, etc.) where separate rules have been prescribed for the determination of the second-hand value, be determined as provided below:
 - i) The first cost of an asset (based on which its second-hand value has to be computed) should be taken as the value of a similar asset at present day prices and not the value actually paid for the asset when it was originally purchased.
 - ii) The second-hand value of an asset that does not depreciate is the same as the first cost.
 - The second-hand value of a depreciating asset should be so appraised that the average annual cost of service or the average cost per unit of service, as the case may be, of the second-hand asset is equal to that of the same or similar asset while new.
- 242 Examples illustrating the application of the principles enunciated in the preceding paragraph are given in Annexure 'H'.
- 243 Post project appraisal It is important that an investment proposal is subjected to proper financial appraisal not only before it is a sanctioned but also a certain period of time after the project has been in operation. Whether the financial return anticipated from a project at the estimate stage is actually realised in due course or not should be determined by conducting a 'Productivity test' in respect of all major works. For any such comparison to be meaningful and realistic, it is important that the computation of the actual additional earnings and working expenses is done on the same lines as at the project estimate stage. As commercial profitability is liable to be affected by escalation in prices or any other extraneous development, in order to have a more reliable and accurate evaluation wherever relevant, a comparison in terms of physical units of throughput may be carried out. Such a comparison should preferably be done classwise in the case of passenger traffic and commodity-wise in the case of goods traffic.
- 244 New Lines In respect of each new line opened for traffic, the railway administration should submit to the Railway Board a statement, showing the financial results of its working in Form No. 244 shown below. The statement should reach the Railway Board not later than the 31st December following the financial year to which it refers and should be accompanied by a covering memorandum in which brief explanations should be given of important variations between the actual realisation and the estimated earnings, together with a Note by the General Manager indicating how the actual net cash flow compares with what was estimated at the project stage. The Note should also bring out the probable traffic prospects of the line in the sixth and the eleventh year of opening.

w Branch Lines.
v

Form No.F.244

RailwayLength in Kilometres	Name of branchOpened on
-	GaugeOpened on

Year	Cost on 31 st March plus calculated interest during construction.			of Branch proper	of branch on the ba costing/f data appl traffic ov branch lin	inancial ied to the er the ne	branch	rning of a proper 1.3-4)
					(exc)	g expenses luding iation & crest)		
	As originally Estimated.	Actuals.	As originally Estimated.	Actuals.	As originally	Actuals	As originally Estimated.	Actuals
(1)	(2	2)	34	1)	Estimated	4)	100.000.000.000.000.000.000.000.000.000	
Actuals after	(2	.)	(3)	(,	4)	(5	9)
opening 1 st year					ja us			
2 nd -year		v .						
4 th year 5 th year								
6 th year 7 th year								
8 th year 9 th year						,		<i>ye</i>
10 th year and so on upto 30								*
years								

Ma	Addition	al net	Total	net	Return	on	Remarks		
Additional	Additiona	l expenses	earnings(Col.6-	earnings		total	cost	
earnings minus	calculated	l on the	7).		(Col.5+8)		Col.9x		
any loss due to	basis of	f costing/					100		
short circuiting	financial	data	100		VV7				
or diversion of	applied	to traffic							0.87
traffic.	from the	existing				4			
	line to b	ranch line						1	
	and vice-v	ersa.				12			
	Working	expenses							
	(excluding						Col.2		
	depreciation	on &					C01.2		
	interest)								
As Actuals.	As	Actuals.	As	Actuals	As	Actuals			

originally Estimated	originally Estimated.	originally Estimated	originally Estimated		
6	7	8	9	9A	10

Foot notes to Form No. F. 244.-

1).	Actuals will be actuals to end of the year for which accounts have been closed, and fresh for the years thereafter.	estimates

2). Special steps taken in the course of the year:-

(a) To develop the traffic earnings-	(b) To reduce the expenses
(i)	(i)
(ii)	(ii)
(iii)	(iii)
(iv)	(i)

(3). Probable future development of traffic and possibility of the line paying its way (short note)--

Head of Traffic Department.

Head of Account Deportment

Note:- The traffic data required to be maintained vide <u>Para 245</u> should be used for costing purposes so as to arrive at the expenditure of the Branch proper and of traffic moving from the existing line to the Branch line and vice versa.

The following statistics should be maintained from year to year in respect of all new lines opened for traffic and submitted to the Railway Board by I st August of each year:

- (i) Passenger earnings from traffic local to the branch line.
 - (b) Other coaching earnings from traffic local to the branch line.
- (ii) (a) Passenger earnings from traffic from the new line to the existing lines and vice versa.
 - (b) Other coaching earnings from traffic from the new line to the existing lines and vice versa.
- (iii) (a) Tonnage of goods traffic local to the branch line.
 - (b) Tonnage of goods traffic inter-changed with the existing lines
- (iv) (a) Earnings from goods traffic local to the branch line.
 - (b) Earnings from goods traffic interchanged with the existing lines.

The following instructions should be followed in preparing the statement F-244:-

- (i) Column 3 should indicate the earnings of the branch from all traffic originating therein, whether local or foreign (Proportion due to the branch) and all traffic received from the main line.
- (ii) Columns 4 & 5 should be worked out on the basis of the costing/financial data under Group 'C'(see Annexure 'A') in respect of the traffic referred to in (i) above.

- (iii) The additional or new traffic interchanged to be shown in column 6 should include only that portion of the traffic received by the main line from the new branch and of the traffic from the main line to the branch, which arises solely from the construction of the new branch line. In the absence of actual figures of additional traffic interchanged with the existing lines, a reasonably approximate figure may be adopted. In the case of chord line short-circuiting a previously existing route, figures relating to cross traffic which would have been carried by the previously existing route, if the chord line had not been constructed, may be omitted from this statement and a proportionate reduction in the working expenses on the branch line made. Column 7 should be worked out on the basis of costing financial data under group 'C' (See Annexure 'A'and para 217).
- The statements vide Paras <u>244</u> & <u>245</u> should be submitted for every completed financial year after the date of opening of the new line for a period of 11 years. The actuals for the years to end of which accounts have been closed and the cash flows for the remaining years of the assumed project life should be arrived at on the basis of the best possible estimation. The entire series of net cash flows should then be discounted to arrive at the rate of return compared to the originally expected return. In case the actual cash flows shown in statement F.244 indicate a fair degree of proximity to the original estimates, it may be assumed that the cash flows for the remaining years of the project life will also follow the same trend unless definite foreknowledge is available to the contrary. If a review of the annual cash flows for a sufficiently long period (say 5 to 7 years) indicates that the cash flows have settled down, within limits, to a 'uniform' series, the Railway Board may decide that submission of the Statements F. 244 & F. 245 for future years in the case of a particular new line be discontinued.
- e. works undertaken with the definite object of increasing earnings or reducing expenditure and to which such tests can be applied within five to seven years of their completion, selection will be made out of these works sanctioned (and/or charged to Capital) on grounds of remunerativeness. All such works costing over Rs. I crore will invariably be subjected to this test. The result of the test should be reported by the General Managers to the Railway Board. In the case of works costing between Rs. 20 lakhs and Rs. I crore charged to Capital and sanctioned by the General Manager within his powers 'of sanction, selection for the purpose of productivity test will be made by him in consultation with his Financial Adviser and Chief Accounts Officer. As stated earlier in the preceding para in the case of New Lines, the actual net cash inflow for each year, to end of the 5th/7th year from the date of commissioning should be recorded for each open line work to be subjected to the productivity test, and the cash flows for the rest of the project life assessed on the basis of the latest estimate. The whole series of net cash flow should then be discounted to arrive at the rate of return compared to the return originally expected.
- 249 In addition to productivity test to be conducted as provided in <u>paragraph 248</u> above, a productivity review should also be undertaken in respect of selected works costing over Rs.10 lakhs which are estimated to fetch some return, even though not the return prescribed for a work being classified as remunerative and as such charged to O. L. W. R. or Development Fund. The methodology to be followed will be the same as prescribed in the preceding para in respect of works costing over Rs.1 crore each. The Railway Board will be selecting works which are sanctioned by them. The selection made by the Railway Board out of such works sanctioned by them will be notified through letters conveying sanction to the estimates for such works. For works costing over Rs. 10 lakhs and upto Rs. 1 crore each, sanctioned by the General Manager within his own powers of sanction, selection for the purpose of productivity review will be made by him in consultation with his Financial Adviser and Chief Accounts officer.
 - Note.-Justification for works or part of a scheme' should show the probable period, that will elapse between the completion of the works and the time when the productivity review can be made. This note equally applies to paragraph 248.
- 250 The fact that productivity tests are to be applied to a particular work should be intimated to the authorities entrusted with its execution as also to the Accounts and Audit officers. In respect of all such

CIO 471 GIR 372

Reminder-I

GOVERNMENT OF INDIA MINISTRY OF RAILWYS (RAILWAY BOARD)

No. F(X)II/2022/PD/1

New Delhi, dated.17.10.2022

General Managers, All Indian Railways.

Sub: Productivity Test.

Ref: This office letter of even number dated 31.03.2022.

Please refer to Board's letter dated 31.03.2022 under reference on the above subject wherein all Zonal Railways were requested to submit the Productivity Test reports undertaken for the works mentioned in the list enclosed with the referred letter.

The requisite report(s) is/are still awaited from your Railway. It is requested that the same may kindly be submitted to this office urgently.

(Ashish Singh)
Director, Finance (Exp.)
(Railway Board)

Copy for information to:

PFAs, All Zonal Railways.

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