



WORK STUDY REPORT
ON
REVIEW OF STAFF
WORKING UNDER STATISTICAL BRANCH
BARODA HOUSE & JUC,
NEW DELHI
2019-20

WORK STUDY TEAM

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GUIDANCE

BY

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No. 16-CP/25/WS/2019-20

Central Planning Cell,
N. Rly, Hq's Office,
Baroda House, New Delhi.

EXECUTIVE SUMMARY

This study of Statistical Branch includes HQ Office, Baroda House & Traffic Accounts Office Jalandhar City allotted to Central Planning Cell, HQ Office on the directives of SDGM/NR to suggest ways and means to improve manpower productivity and efficiency as well as right sizing of the staff.

STAFF POSITION

The total sanctioned and on roll strength of Gr. 'C' & 'D' staff working in Statistical Branch HQ Office NDBH & TA Office JUC is given below:-

S.N.	Station	Category	S/S	O/R	Vacancy.
1	Statistical Branch	Group 'C'	115	67	48
	Baroda House	Group 'D'	17	07	10
Total			132	74	58
2	Traffic Account office	Group 'C'	41	24	17
	JUC	Group 'D'	05	03	02
Total			46	27	19
Grand Total			178	101	77

No. of posts identified as surplus and recommended for surrender: -

Gr. 'C' = 70 posts

Gr. 'D' = 12 posts

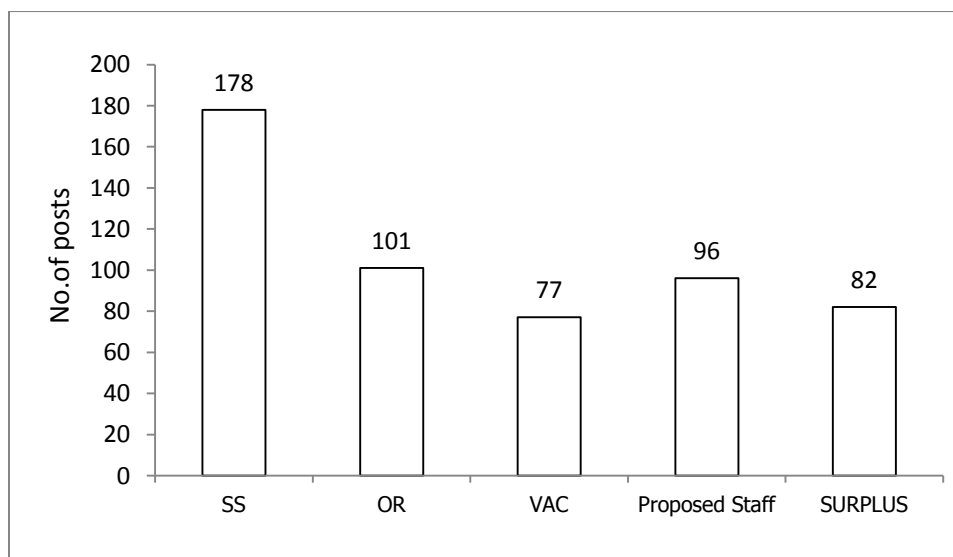
Total = 82 posts

FINANCIAL IMPLICATIONS

Anticipated recurring savings = ■ 718.28 lakh per annum.

Capital saving = Nil

Total = ■ 718.28 lakh per annum



I N D E X

S.N.	Contents	Pages	
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SYNOPSIS

The Statistical Branch is functioning under the administrative control of FA&CAO/T Northern Railway and plays a vital role in keeping the various statistics of different departments. The main function of this office is to prepare the statement out of data submitted by divisions which helps the Railway after comparison from the last year to determine the loss, profit & expenditure & other statistics.

Compilation of Railway statistics of Indian Railways falls broadly under two categories namely:

- (i) The statistics required to be compiled by Zonal Railways, in order to keep themselves generally informed about the different activities of Indian Railway.
- (ii) Detailed Railway statistics which individual Zonal Railways may undertake for their own respective domestic requirements.

The compilation offices on the Railways undertake only the processing of important types of statistics namely operating and commercial statistics which between them constitute the bulk of the statistical information supplied to the Railways and Railway Board. A certain amount of compiling work is also linked up with the work of other offices. The actual compilation of the statistics reported for accidents, claims, marshalling yard operation, terminal operation, rolling stock, workshop etc. is generally undertaken by the concerned department, although in some cases there may be consolidated and reported by the statistical offices. Additional statistics are also compiled by Railways for their domestic needs and the outside bodies.

With the advancement of technology in almost every sphere of Indian Railways over a period of time, there are a lot of changes in the working pattern of staff. The various activities at stations, sheds, and workshops have been computerized such as PRS, UTS, ATVM, TMS, CMS, EPS etc. These activities have manifold reduced the manual checking, preparing of statement and correct charging of passenger and goods fares.

Keeping in view of above, SDGM/NR assigned work study on "Review of Staff working under Statistical Branch at Baroda House and TA Office JUC" with a view to eliminate wasteful expenditure and to economize the system. The work study team has conducted the study by taking into consideration of the existing workload, yardstick and spot observations. The work study team has made one recommendation. After the implementation of the work study recommendation, a net recurring saving to the tune of ₹718.28 lakh per annum will be achieved.

SUMMARY OF RECOMMENDATIONS

S. N.	Recommendations	Refer para No.	Accepting/ implementing authority.																												
1	<p>It is proposed that 68 posts in different categories and grade identified as surplus in Statistical Branch, Baroda House New Delhi and recommended for surrender as follow:</p> <table border="1"> <thead> <tr> <th>SN</th><th>Category</th><th>Pay scale + G.P.</th><th>No. of posts</th></tr> </thead> <tbody> <tr> <td>1</td><td>Ch. OS</td><td>9300-34800+4600</td><td>06</td></tr> <tr> <td>2</td><td>OS</td><td>9300-34800+4200</td><td>29</td></tr> <tr> <td>3</td><td>Sr. Clerk</td><td>5200-20200+2800</td><td>12</td></tr> <tr> <td>4</td><td>Clerk</td><td>5200-20200+1900</td><td>07</td></tr> <tr> <td>5</td><td>Gr.D</td><td>5200-20200+1800</td><td>10</td></tr> <tr> <td colspan="3">Total</td><td>64</td></tr> </tbody> </table>	SN	Category	Pay scale + G.P.	No. of posts	1	Ch. OS	9300-34800+4600	06	2	OS	9300-34800+4200	29	3	Sr. Clerk	5200-20200+2800	12	4	Clerk	5200-20200+1900	07	5	Gr.D	5200-20200+1800	10	Total			64	2.10.3	FA&CAO/T BH NDLS Asth. Statistical & Analysis Officer, BH NDLS
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5	Gr.D	5200-20200+1800	10																												
Total			64																												
2	<p>It is proposed that 18 posts in different categories and grade identified as surplus in Statistical Branch, Traffic Account Office JUC and recommended for surrender as follow:</p> <table border="1"> <thead> <tr> <th>SN</th><th>Category</th><th>Pay scale + G.P.</th><th>No. of posts</th></tr> </thead> <tbody> <tr> <td>1</td><td>OS</td><td>9300-34800+4200</td><td>05</td></tr> <tr> <td>2</td><td>Sr. Clerk</td><td>5200-20200+2800</td><td>06</td></tr> <tr> <td>3</td><td>Clerk</td><td>5200-20200+1900</td><td>05</td></tr> <tr> <td>4</td><td>Gr.D</td><td>5200-20200+1800</td><td>02</td></tr> <tr> <td colspan="3">Total</td><td>18</td></tr> </tbody> </table>	SN	Category	Pay scale + G.P.	No. of posts	1	OS	9300-34800+4200	05	2	Sr. Clerk	5200-20200+2800	06	3	Clerk	5200-20200+1900	05	4	Gr.D	5200-20200+1800	02	Total			18	2.11.11	FA&CAO/T BH NDLS Asth. Statistical & Analysis Officer, BH NDLS				
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ACKNOWLEDGEMENT

The work study team is highly grateful to Sh. Anurag Kapil, FA&CAO/T/NR, Smt Alka B. Kumar Dy. FA&CAO/T Baroda House, New Delhi & Smt. Hemlata, Asstt. Statistical & Analysis Officer, Baroda House, New Delhi and other functionaries for extending their full co-operation in providing relevant data/information and giving valuable guidance and cooperation to the team during the conduct of study.

1.0.0 INTRODUCTION

1.1.1 Two wings of Statistical Branch play a vital role in preparing the statistics of earnings from various heads. Some of the figure/CTR comes directly to Statistical Branch from various Division of N.Rly and some are received from EDPM centre after tabulation. These figures are compiled to make various statements under various heads, which help the Railways to compare the expenses, profit and other statistics.

1.1.1 Railway earning consist of the following:-

- Passenger earning (PRS, UTS, ATVM, PCT, EFT, BPT, MST etc.)
- Goods earnings
- Other coaching earnings (Parcel, luggage etc)
- Sundry earnings i.e., publicity, land rent license fee etc)

The principle heads under which the Railway statistics are generally grouped are indicated in the following paragraphs.

1.1.2 Economic & Financial statistics :- under this head are to be included the detailed relating to the tri-monthly approximate figures of earnings, traffic hand in the shape of passengers booked for current information and the monthly statics of tonnage lifted and wagon loaded and of revenue & expenditure as booked in monthly and yearly account.

1.1.3 Transportation statistics: - Here are the statistics of both the total transport output i.e., work done as well as efficiency of operation. For examples, the number of trains run, train km, shunting km, wagon or vehicle kilometer, engine kilometer, total oil consumed, tone km transported etc. Example relating to different aspects of Rly. Operation are as:

- (a) Punctuality and speed of the passenger trains
- (b) Speed & loads of goods trains
- (c) Wagon usage as indicated by wagon km per wagon day. NTKM per wagon day, Average starting wagon load and average load during the run
- (d) Engine usage- namely engine km per day, engine in use on different services and on line net tone km per engine per day and per engine per hrs
- (e) Auxiliary i.e., unproductive services such as shunting km per 100 train km, %age of train to total engine hrs etc.
- (f) Marshalling yards, terminal goods stations and break of gauge points statistics
- (g) DSL oil/Electric energy consumed per engine km and per 1000 GTKM.

1.1.4 Commercial Statistics:- Under this head are included the statistics related to no. of passenger per ton carried, passenger km, tone km, average rate per passenger or tone km and average hrs. of traffic, statistics regarding freight

traffic and earnings by commodities claims for computerization of goods or parcel, lost or damage in transit also included in this category.

- 1.1.5 Rolling Stock & Workshop Repair Statistics: - Under this head are grouped statistics dealing with the repair and maintenance of rolling stock, engine failures, hot boxes etc. as well as outturn & other information relating to repair shop activity.
- 1.1.6 Administrative statistics: - Under this head are grouped statistics related to staff matters, their nos. incidents of sickness, accidents, pay categories etc; besides the physical statistics like route kms, no. of stations, gradients, curvature of the permanent way.
- 1.1.7 As a matter of fact in present scenario of computerization the working of PRS, UTS & internet ticketing by IRCTC has resulted in generating a lot of summarized information of station record through computers which has not only eased the working of statistical branch, but also reduced the manual working.
- 1.1.8 Keeping in view of above, SDGM/NR directed to conduct the "Review of staff under Statistical Branch at Baroda House New Delhi and TA Office JUC" to eliminate redundant expenditure and to optimize the effective utilization of manpower. It was also emphasized to get away from unproductive and obsolete activities and suggest ways and means to improve the system by technological up gradations/advancement.

1.1.9 TERMS OF REFERENCE:

The study has been conducted under the following terms of references:-

- 1. To review staff strength vis-à-vis existing workload.
- 2. To identify redundant/unproductive activities and to eliminate wasteful expenditure.
- 3. To suggest ways and means to improve the standard of efficiency and production of the system.

1.1.10 METHODOLOGY ADOPTED

The following techniques of work study were adopted to conduct the work study:-

- 1. Data collection and it's critically analysis.
- 2. Work sampling, physical observations, sport checks, analytical estimation, prevailing yardstick in vogue, if any, to access the staff
- 3. Held discussions at various levels.

2.0.0 BRIEF DESCRIPTION, STAFF POSITION, WORKLOAD, CRITICAL ANALYSIS, PROPOSED REQUIREMENT OF STAFF, RECOMMENDATIONS AND GENERAL OBSERVATION.

2.1.0 BRIEF DESCRIPTION

2.1.1 Statistical Offices situated at HQ Office, Baroda House and JUC are functioning under the administrative control of FA&CAO/T/HQ. The main functions of these offices are to compile the statements/statistics of passenger earnings, Goods earnings, fuel consumption operating ratios. Details of gross earnings, details of working expenses, mileage statements, number of stations classified as interlocked, block, flag, halt & out agency etc, locomotive, rail cars in service, coaching stocks, goods stocks, traction wise tones mileage, passenger/goods train performance, speed of goods trains (traction wise), rolling stock performance, lubricating oil statistics, passenger revenue, parcel traffic statics, goods revenue statistics EMU, MEMU, DMU/DHMU performance, Goods terminal statistics commodity loading statement etc.

2.1.2 These statistics/statements are prepared monthly (period wise) quarterly, half yearly and yearly & helps railway to know its profit or loss and performance etc.

2.1.3 Statistical Branch in two wings are functioning at different locations i.e.

- Baroda House, New Delhi.
- T.A. Office Jalandhar City.

2.1.4 Railway statistics are based on factors of quantity, distance, duration & service. The primary factors denoting these units are expressed as follows:-

- a) Quantity- Expressed in numbers of tonnes and passengers transported and in earning derived.
- b) Distance- expressed in kilometers
- c) Duration- in hours & days.
- d) Service- in trains, vehicles, wagons and engines.

These primary units linked together to denote joint conceptions and are expressed in composite terms called fundamental units i.e. Tone kilometer-represents, product of quantity & distance travelled. In the similar manner, passenger kilometers, train kilometers, wagon kilometers, engine kilometers, engine hours, wagon days etc. are obtained. Finally, the eventual conceptions on which statics are based i.e., the relationship that exists between two sets of primary or fundamental units and the results thus arrived at, are termed as derivative units.

2.2.0 STAFF POSITION:

During the conduct of study, the work study team collected the staff position of statistical staff working at Statistical Branch at Baroda House and TA office JUC which is depicted as Annexure No.II in the report and the summarized position of the same is given below:-

S. No.	Wing	S/Strength	On roll	Vacancy
1	BARODA HOUSE	132	74	58
2	TA Office JUC	46	27	19
TOTAL		178	101	77

The above table reveals that the on roll strength is 101 against the sanction strength of 178 and 77 posts in different categories and grades are lying vacant in the Statistical Branch at Baroda House and TA office JUC

2.3.0 STATISTICAL BRANCH BARODA HOUSE

Statistical Branch Baroda House wing is functioning under the administrative control of Asstt; Statistical & Analysis Officer, Baroda House. This wing consists of the following sections:

- i. Receipt & Sorting Section.
- ii. General Section.
- iii. Commercial Section.
- iv. Operating I & II.
- v. Coding Section-I, II & III.
- vi. Inspectorial section.

2.3.1 STAFF POSITION & SECTIONWISE DEPLOYMENT OF STAFF AT STATISTICAL BRANCH BARODA HOUSE:

S. No.	Section	S/Strength	On Roll	Vacancy	Remark
01	Receipt & Sorting	109	06	44	
02	General Section		06		
03	Commercial Section		12		
04	Operating Coding-I		08		
05	Operating Coding-II		05		
06	Coding-I		07		
07	Coding-II		08		
08	Coding-III		07		
09	OS		04		Deployed at Const Deptt K Gate
10	Inspectors cell		02		CA=01 Draftsman =01
11	Inspectors	06	02	04	
Total Group 'C'		115	67	48	
Group 'D'		17	07	10	EDPM=1 Traffic Costing Off=01
Grand Total Group 'C' & 'D'		132	74	58	

The above table reveals that the on roll strength is 74 against the sanction strength of 132 and 58 posts are lying vacant in different categories and grades under Statistical Branch Baroda House, New Delhi.

2.3.2. WORKLOAD

The workload being maintained in the form of monthly & yearly statement is placed as Annexure No.III & IV respectively in the report and the summarized position is given as under:-

Monthly Statistical statement = 29 nos.

Yearly statistical statement = 53 nos.

The section wise workload is shown in the report.

2.3.3 CRITICAL ANALYSIS:

During the conduct of study the work study team collected the workload of the sections and examined critically. It has been observed that in some of the sections the staff is under utilization. In coding sections the work is being done at the rate of 160 entries per man per day in spite of introduction of technological development like computerization of coding process. It was observed that on an average 35758 entries are made per month. As per prevailing practice one man should make 160 entries per day. Since the on roll staff strength is 22 and total entries should be $22 \text{ men} \times 160 \text{ entries} \times 20 \text{ working days} = 70400$ entries per month which shows under utilization of manpower. During discussion it was apprised that there are 09 computer installed in coding section since Jan-2019 to facilitate the coding process. Computerization certainly enhances the productivity of the coding section. Before computerization the prevailing practice was @160 entries per man per day, but at present after introduction of computer era, the entries per man per day must be more than 160 entries.

Data compilation work of statistical deptt can be made easy, comfortable and fast if the different statements and CTR and other data be submitted on line by division in the era of computerization which will be enhance the man power productivity and efficiency of Railway working.

During the work study it was observed that staff is not being utilized due to inadequate availability of computers and rail net. Efficiency will definitely increase after availability of sufficient computers with rail net connections.

2.4.0 RECEIPT & SORTING SECTION:

CTR are received from all 5 divisions of Northern Railway from sheds as well as from lobbies. CTR are sorted and bundles are made having 40 CTR in each bundle and then these bundles are sent to coding-I II & III sections for coding.

2.4.1 STAFF POSITION & DEPLOYMENT OF STAFF

CH.OS = 02
OS = 04
Sr. Clerk = 01
TOTAL = 06

2.4.2 WORKLOAD: CTR received from the lobbies of FZR UMB, LKO, DLI and MB division. The year wise detail of CTR received is as under

F Year	Total No of CTR Received	Average CTR per month	No. of bundles @ 40 CTR per bundle/month
2016-17	469524	39127	978
2017-18	460933	38411	960
2018-19	463226	38602	965

The work study has considered the workload of the FY 2018-19 while proposing the requirement of staff

2.4.3 PROPOSED REQUIREMENT OF STAFF:

Total CTR received for FY 2018-19 = 463226
CTR received per month = $463226/12$
= 38602 nos.
CTR per day handled = $38602/20$
= 1930 nos.
@ of 40 CTR per bundle = $1930/40$
= 48 bundles
Existing on roll staff = 6
No. of bundle made per man per day = $48/6 = 8$
The workload comes to 8 bundles per man per day
Manpower required = $48/8 = 06$ men
The proposed requirement comes to = 06 men

2.5.0 GENERAL SECTION:

This section deals with all administrative work related to maintain leave record, Pass & PTO, salary of staff, Tool & Plant etc. This section also arranges print out of Statistical Books & sent it to departmental heads & Divisions. Raj Bhasha matters, NOC of passport, MACP & leave encashment, compilation of monthly, quarterly, half yearly and yearly statement and other matters of officers, union matters. Correspondence with JUC branch of statistics. Dak receipt & dispatch, procurement of stationary items for the branch.

2.5.1 STAFF POSITION & DEPLOYMENT OF STAFF:

CH.OS	= 02
OS	= 04
TOTAL	= 06

2.5.2 WORKLOAD OF PASS & PTO SECTION w.e.f. April'2018 to March'2019 01 yr.

Staff deputed on pass seat, prepare pass/PTO to regular and retired employees. Also prepare Duty/special pass, maintain travelling allowance file, PF register, and prepare family identity card for retired employees, medical cards for regular employees. Total pass/PTO, medical cards etc prepared in a year is as under:

Pass	=304	
PTO	=131	
Total	=435	
Avg./month	=435/12	= 36.25
Avg./day	=36.32/20	= 1.81 say 2 pass/PTO per day
Medical/I card	=34	
Avg./month	=2.83	
Avg./day	=0.14	

This is meager workload and under utilization of manpower some other work may also be allotted to this seat.

2.5.3 PROPOSED REQUIREMENT OF STAFF:-

The team visited general section in which 12 staff found on roll. It was apprised by the Ch. OS that out of 12 staff, 06 staff are working at different locations in other departments, which is as under:-

CH.OS	=02 working in Construction Office, K. Gate.
OS	=02 working in Construction Office, K. Gate.
Peon	=01 working in EDPM Center.
Peon	=01 working in Traffic costing section
Total	=06

Proposed requirement of staff in general section is as under:-

Description of work	Proposed Requirement of staff
Overall incharge of section who also looks after correspondence work, union meetings and other works like timely submission of monthly, quarterly and yearly statement.	01.
For Raj Bhasha matters, NOC of passport, MACP & leave encashment, compilation of monthly, quarterly, half yearly and yearly statement and other matters of officers.	02
For dak receipt & dispatch approx. 45 items, preparation of pass & PTO, travelling allowance file, PF register, family identity card for retired employees, medical cards etc.	01
For preparation of statistics booklets for officers & other railways/Railway Board.	01
Total	05
LR @ 12.5%	0.62
Total	5.62 say 06

The team observed the working of this section and opines that the above proposed requirement of 06 staff is sufficient to cope up with the existing workload. 06 staff working at other locations may be withdrawn/surrendered. The total 06 posts identified as surplus and recommended for surrender.

2.6.0 COMMERCIAL SECTION:

This section deals with the statement 7A, 7B, & 7C, 6B, 40-II annexure-A, 40-II annexure-B, 12 loading & earning statement monthly & cumulative, trade block statement, passenger classifications & revenue statement, 6A, compilation of invoices of all divisions, compilation of loading statement, annual statement ST-40, ASS-40 MCDO data, STC-2 statement. 4A diesel and electric disposition of division, 10A rolling stock in locomotive stock, 10B rolling stock in coaching stock, 10C rolling stock in wagon stock, 10D rolling stock in service coaching and goods in narrow gauge.

2.6.1 STAFF POSITION & DEPLOYMENT OF STAFF

CH.OS =07

OS =04

SR.CLERK =01

TOTAL =12

2.6.2 WORKLOAD AND PROPOSED REQUIREMENT OF STAFF: Description of various types of statements and proposed staff is as under:

S No.	Statement No.	Schedule of Statement	Description statement/workload	Proposed Requirement of staff
1	7A	Monthly	Goods revenue statistics (Plan head commodities) Originating loading, Tonnes, earnings, NTKM, lead & rates. Contains 18 categories like cement, food grains, fertilizers, mineral oils, container, DOM, EXIM, Coals, Iron, Iron Ore	01.
	7B	Monthly	Statement: Goods revenue & non revenue statistics (all commodities) Originating loading, Tonnes, earnings, NTKM, lead & rates. Contains 990 commodities like Gram, Moong dal, masoor dal, wheat, rice, maize etc trade Block statement; generated monthly & quarterly.	
2	6-A	Monthly	Originating/carried passenger, PKM, carried earnings, average, lead/rate. Extract 'X'	02
	12	Annual	Passenger earning statistics. Prepare earning for PLB & budget	
3	10A	Annual	Locomotives/railcars, tractive efforts, rolling stock in services (on ownership basis) locomotive stock	01
	10B		Coaching stock seat/berth, rolling stock in services (on ownership basis) coaching stock	
	10C	Annual	Detail of goods stock, capacity, rolling stock in services (on ownership basis) wagon stock	
	10D	Annual	Coaching stock seat/berth (NG) rolling stock in services (on ownership basis) coaching & goods stock	
	15	Annual	N/G Data for PLB Prepare Annual & annually PKM in 000, ratio number of passengers, PKM & earning.	

4	6-B	Monthly	Parcel traffic statistics, weight , earning and NTKM of parcel & luggage. Bundles are collected from TRB section of State entry road of MB, FZR, LKO and UMB division and posted station wise on every ten days.	01
5	ST-40	Annual	It is an statement, comprising of Staff statistics. 40-I: No of staff employed on N Rly, 40-II: Annexure-A: statement of department wise SC/ST employees of N Rly, 40-II: Annexure-B: statement of total number of Gr A & B (permanent/temporary of open line and construction) 40-II: statement of retired book on pension and amount disbursed on N Rly, Statement of total number of staff and cost of staff on N Rly. 40-IVA Statement of department wise pay scale of Gr C staff (open line and construction), 40-IVB: Statement of department wise pay scale of Gr D staff (open line and construction), 40-V: Statement of man days lost due to sickness on N Rly, 40-VIA: statement of number of attacks/death due to diseases on N Rly, 40-VIB: statement of infrastructure and performance of Medical department, 40-VII: Statement of department wise total number of female employees on N Rly. Statement of Gr C & D staff housed (provision with Rly accommodation)	01
6	Govind Ballabh Pant Shield 15 30	Annual Annual	Important indices of Monthly evaluation report, data for Govind Ballabh Pant Shield, N Rly Shield and efficiency shield. Goods terminal statistics: wagon dealt with and detention to wagons Demand wise details of working expenses	01
7			ST-1:Financial result recd from books deptt of Account ST-2:Capital at charge recd from books deptt of Account ST-2B:Capital outlay recd from books deptt of Account ST-3:Total investments recd from books deptt of Account ST-4:working expenditure (HD) recd from books deptt of Account ST-5:Capital at charge earning and expenditure recd from books deptt of Account ST-7:working expenditure recd from books deptt of Account ST-43:Cost of police force recd from books deptt of Account ST-8: Route Km which are received from Engg Deptt ST-9A:Particulars mean Km received from Engg Deptt ST-9B: Classification, No. of stations, received from all divisions. ST-38A & B: Value of store purchase Dy. CAO/stores ST-39A & B:Store transition length AFA/IC	01

			ST-41: Data Accidents received from safety Deptt. ST-44: Sug-standard of staff Qtrs, Annexure: source of water supply, received from Engg Deptt Chasing, collecting, compiling of data for preparing the statements.	
8	12 6A Abstract-Y 7C 13 6	Annual Monthly Annual Monthly Annual Monthly	<p>Passenger revenue statistics: data of Sub urban, non sub urban, seasonal, ordinary, all classes passengers, It is a monthly statement: Passenger originating, passenger carried, Passenger Km. Passenger earning, passenger rate and lead and compilation of average rate and average lead</p> <p>This statement is abstract of statement 7C (Commodity statistics, carried tonnes, earning, NTKM, Lead and rates)</p> <p>Commodity statistics, carried tonnes, earning, NTKM, Lead and rates. Prepare 7C variation, current and previous year (selected commodities), Maintain the records of Abstract-Z, CO13, other coaching earning (month wise) received from Acc Deptt.</p> <p>Goods Revenue statistics statement Compilation, the strategic earning and preparation of statement No.13</p> <p>Detail of gross Earning, compilation and preparation of annual statement No.6 and sent to RB.</p> <p>Commodity loading statement, loading, transporting, repacking, military, RMC in breakup of heavy and light Commodity. Also compile the data for preparing MCDO</p>	02
			Total	10
			LR @ 12.5	1.25
			Total	11.25 say 11.00

The proposed requirement for commercial section comes to 11.

2.7.0 OPERATING-I & II:

This section deals with the performance statement of the operating department and maintain NTKM per wagon day, NTKM/Engine hrs, wagon km per wagon day, wagon round, engine km/goods engine in use, ineffective % age, fuel/energy consumption per 1000 GTKM; wagon km per wagon day, NTKM per wagon day. CTR are received from the sheds/lobbies of all N.Rly. Division, compiled and sent to EDPM centre, for tabulation and adjustment sheet is prepared by operating section and from this sheet seat wise data is segregated & statements are prepared

2.7.1 STAFF POSITION & DEPLOYMENT OF STAFF OF OPERATING-I:-

CH.OS =02

OS =06

TOTAL =08

2.7.2 WORKLOAD AND PROPOSED REQUIREMENT OF STAFF: Monthly & annual statements are prepared as follows:

S No.	Statement No.	Schedule of Statement	Description statement/workload	Proposed Requirement of staff
1	7-C	Monthly	Commodity statistics carried tones, earnings, NTKM, lead & Rate: NTKM are compiled from Optg and commercial, NTKM/Engine Hrs, wagon Km/wagon day, wagon turn round, Engine Km/goods engine in use, ineffective percentage of Dsl, electric, electric PCV and wagon of different figures. PCV Km/PCV day, Fuel/energy consumption per 1000 GTKM. MER is complied, Train Km (Accdt) Electric and Diesel loco utilization (BG) wagon Km per wagon day on line (BG) NTKM per wagon day on line & in use (BG)	01.
2.	3A	Monthly	Passenger and Goods train performance, net and gross performance: compiling of following data; GTKM (I) G including wt of engine GTKM (E) G excluding wt of engine GTKM (I) G including Departmental GTKM (E) G excluding Departmental Average train load, gross load, NTKM per wagon, NTKM per engine hour, GTKM per engine hour, GTKM engine weight,	01
	3B	Monthly	Goods train performance, van and shunting performance. compiling of following data;	
	16	Annual	Train Km goods, train engine hrs; wagon km loaded/empty, wagon km total, net tonne km, gross tonne km excluding engine wt, GTKM including engine wt,	
	19B	Annual	Tonnes Km. compiling of following data;	
	23	Annual	Traction wise Diesel electric, diesel hydraulic, gross ton km of passenger and goods (proportion of	

	25	Annual	mixed, including and excluding wt of engine) This statement contains detail of though van shunting; goods train performance, traction train km, train hrs and wagon km, GTKM including wt of engines, load of trains.	
	28	Annual	Compiling of following data; load of train traction wise, average train load excluding departmental, passenger train number of vehicle per train, number of passenger carried per train, total loaded wagon per train, gross wt Density of traffic; this statement is made gauge wise, per running track km, per route km, passenger km per annum, NTKM per annum, train km per day. Efficiency statistics; goods and goods proportion mixed, traction wise with ITKM, wagon turn round, excluding wt carried, NTKM per km hrs, engine hrs, gross train km, annexures with all annual statements are also prepared.	
3	IRFA	Monthly	IRFA is a monthly statement; data are compiled from 4-A diesel disposition of all five divisions; train km, light engine km of passenger and goods trains. Figures are also compiled from 4-A electric disposition, train km, light engine km of passenger and goods trains. Collect the figure from all zonal Railways like, train km, light engine km, train hrs, NTKM, GTKM.	01
4	4B 19 26B 26A 24	Monthly Monthly Annual Annual Annual	Rolling stock (carriage and wagon performance) vehicles and wagons on line/in use and ineffective. Fundamental information related to monthly statement No 1B to B, cost of repair and maintenance of rolling stock. cost of repair of rolling stock at source. wagon and vehicle uses. detail of fundamental unit i.e. vehicle km, average wagon load (all traffic) wagon km etc	01
5a	1A 1B 17 18 19A 21	Monthly Monthly Annual Annual Annual Qtly	Passenger train performance, punctuality statistics: Punctuality of Passenger and mixed train; number of train, number/percentage of punctual trains, number/percentage of punctual EMU's and 1A statement is prepared. Passenger train performance, train km/hrs and vehicle usage: passenger train km, diesel engine km, shunting km, other engine km, net engine km, per hundred train km, light engine km, diesel engine km of foreign Rly working in N Rly, fuel consumption Service wise train/shunting/other engine km; passenger train and goods train km BG/NG, km of Diesel, electric and hydraulic are compiled and statement No 17 is prepared Train/engine hrs, %age of train to total: detail of passenger/goods and mixed trains km BG/NG, traction wise engine hrs are compiled.	01

			<p>Traction wise vehicle/wagon km: data of loaded wagon km, other km of goods trains, mixed vehicle km compiled and sent to Rly Bd.</p> <p>Service wise shunting light engine km, percentage of shunting km to 100 train km, goods performance, light engine km percentage of BG/NG</p>	
6	CA-299F 5A 27A 27B	Monthly Annual Annual Annual	<p>Train km, GTKM, fuel consumption, passenger goods, shunting, rail bus and departmental. CA-299 is prepared taking data from DSL shed KLK and PTK NG. Train KM, light engine km, total engine km, NTKM, train hrs, engine hrs, skeleton km, fuel consumption, passenger engine km, speed of train and engine NG.</p> <p>Fuel and energy statistics specific fuel consumption SFC/SEC rate per 1000GTKM and engine km of NG. Fuel consumption by classes of fuel, It contain fuel cost and sent to RB</p> <p>Fuel consumption by classes of service</p> <p>It is prepared on the basis of 5A and contains consumption of fuel by classes of services.</p>	01
7	2 17 18 19 20 21 22	Monthly Annual Annual Annual Annual Annual	<p>It is cumulative statement data collected from all division for compilation of late start goods trains and block load run and contains , train km, train hrs for goods train, wagon loaded and total wagon km, shunting km, average speed of goods train, average train load, average shunting wagon load, wagon km per wagon day.</p> <p>Serve wise train/shunting/other engine km</p> <p>Train/engine hrs, percentage of train to total goods proportion</p> <p>Traction wise vehicle/wagon km</p> <p>Traction wise average speed of goods train and prepare annexure regarding detail of fundamental units in respect of goods train</p> <p>Service wise shunting/light engine km of goods proportion</p> <p>Engine usage Authorized stock of P. Oil on line, available to usage of P. Oil, average No of P. Oil in use, engine km/day/engine in use. Engine failure, NTKM annexure No 22 showing engine performance</p>	01
			Total	07
			LR @ 12.5%	0.875
			Total	7.87 say 08

2.7.3 STAFF POSITION & DEPLOYMENT OF STAFF OF OPERATING-II:-

CH.OS =03

OS =02

TOTAL=05

2.7.4 WORKLOAD AND PROPOSED REQUIREMENT OF STAFF:

Monthly & annual statements are prepared as follows:

S No.	Statement No.		Description statement/workload	Proposed Requirement of staff
1	9 Part-I Part-II	Monthly	Train performance similar to statement No. 1A,1B,2; 1A: Passenger train performance punctuality statistics. 1B: Passenger train performance, train km/hrs and vehicle usage. 2: Goods train performance, train km/hrs and wagon usage Train performance similar to statement No. 3A, 3B, 4A & 4B. 3A: Passenger & Goods train performance, net & gross performance. 3B: Goods train performance, van and shunting performance. 4A: rolling stock (locomotive) performance, engine usage. 4B: rolling stock (C&W) performance, vehicle & wagon on line/ in usage and ineffective. Monthly cumulative & fundamental figures of 9 part-1 & part-II	01.
2	5A (BG) CA 299-F BG 5B 27 A, 27 B 27 C BG	Monthly Monthly Monthly Annual Annual	Traffic density statement, month wise & year wise, division wise, traction wise figure from data of CTR tabulation. Fuel & energy statistics, specific fuel consumption SFC/SEC rate per 1000GTKM and engine km of BG taking CTR tabulation and OP 73 receive from TKD, LDH, LKO, SSB, JUC & MB diesel shed, non loco fuel statement from Optg branch. Train km, GTKM, fuel consumption, passenger goods, shunting, rail bus and departmental. CA-299 is prepared taking data from DSL shed TKD, LDH, LKO, SSB, JUC & MB diesel shed. Train KM, light engine km, total engine km, NTKM, train hrs, engine hrs, skeleton km, fuel consumption, passenger engine km, speed of train and engine BG. Lube oil statement consumption per 100 engine km and 1000 V/W km: data collected from mechanical & electrical branch, CTR tabulation and OP-73 NG KLK-SML, Kangra valley section. Prepare rate of fuel statement and send to all Zonal Rly	01

	31	Annual	Fuel consumption/cost by classes of fuel, It contain fuel cost and sent to RB		
	33	Annual	Fuel consumption/cost by classes of service. It is prepared on the basis of 5A and contains consumption of fuel by classes of services. Electric energy consumption. Lube oil consumption statement on the basis of 5B (BG/NG) Rail cars, car km/car day on the basis of 5B (BG/NG), Annual statement narrative report on the basis of CA-299F, Carriage & wagon annual statement.		
3	16 Division operating performan ce	Monthly	Tonnes km: Detention to wagon in goods terminal station from ASR, LDH, JUC, CHKB, LKO and BSB shed/yard. Data collected from CTR tabulation, punctuality statement, wagon turned round from all division, wagon holding statement from Optg branch, No. of wagon statement, energy consumption statement and Division operating performance is prepared.	01	
	fundament al average speed of Exp/Pass trains	Yearly	By collecting data from CTR tabulation and ASS 32 (EMU suburban) and also maintain monthly cumulative and fundamental figures.		
4	8	Monthly	EMU/MEMU/DEMU/DHMu performance: Operating and commercial performance: Data received from Sr DEE.TRD and OP-73 from, SSB, JUC, BDGM shed. Lube oil statement from EMU car shed GZB and commercial statistics from 6A.		
	32	Annual	Preparing GTKM/power consumption of EMU/MEMU. Prepare monthly cumulative and fundamental figures on the basis of Statement-8. EMU suburban: Prepare statement 32 and annexure of 32 on the basis of statement-8 and annual statement -12	01	
				Total	04
				LR @ 12.5%	0.5
				Grand total	4.5 say 5.0

2.8.0 CODING I, II & III SECTION:-

CTR are received from 5 divisions of N.Rly; sheds and lobbies. These CTR are sorted and bundles of 40 CTR each are prepared and handed over to concerned coding staff. These CTR are coded and entries are made on ST-62 Form & sent to EDP Centre. As per prevailing practice entries are done @ 160 entries per man per day. Tabulation is done from these CTR in EDP Centre.

2.8.1 Calculation of working days in a month:

Total days in a year = 365

Saturday and Sunday = 104

CL=08, RH=02, NH=12 total=126 days

Total working days in a year = 365-126=239 days,

Total working days in a month = 239/12= 19.91 say **20 days**

On an average **20 days per month** are taken as working days for assessment of staff.

2.8.2 STAFF POSITION & DEPLOYMENT OF STAFF: - The section wise on roll existing staff is as under:-

Section	Ch. OS	OS	Sr. Clerk	Clerk	Total
Coding-I	03	03	01	01	07
Coding-II	02	04	01	--	08
Coding-III	03	04	--	--	07
Total	08	11	02	01	22

2.8.3 WORKLOAD:

For the FY Year 2018-19 (12 months)

Section	Total CTR entered	Total Entries Per Annum	Total Entries Per Month	Avg. no. of entries per CTR
Coding-I	33919	115063	9589	3.39
Coding-II	35806	153162	12764	4.28
Coding-III	37903	160857	13405	4.24
Total	107628	429082	35758	3.97

The above table reveals that the total entries come to 35758 per month.

As per prevailing practice one man does 160 entries per day.

On roll staff strength is 22

Total entries should be 22men x 160entrie x 20 working days=70400 entries per month.

This shows under utilization of manpower. During discussion it was apprised that there are 09 computer installed in coding section since Jan-2019 to facilitate the coding process. Computerization certainly enhances the productivity of the coding section. Before computerization the prevailing practice was @160 entries per man per day, but at present after introduction of computer era, the entries per man per day must be more than 160 entries.

Data compilation work of statistical deptt can be made easy, comfortable and fast if the different statements and CTR and other data be submitted on line by division in the era of computerization which will be enhance the man power productivity and efficiency of Railway working.

2.8.4 PROPOSED REQUIREMENT OF STAFF:

The team visited coding section, I & II & III and interacted with the Ch. OS incharge to know about the working procedure. It was apprised that CTR (Combined Train Reports) are received in this office from different sheds/lobby wise of N.Rly. Some heads of these CTR i.e., Engine No., type of engine, home sheds, station from to station, load gauge & traction etc. are taken for entries in ST-62 (Code sheet for operating statistics) to prepare operating & commercial statistics. The workload shown in above table shows total entries in the year 2018-19 was 35758 nos. As per prevailing practice @ 160 entries per man per day, work being done by this section, the work study team has assessed the requirement of staff on the basis of actual work done. Section wise proposed requirement of staff assessed as under:

2.8.5 FOR CODING-I

Total CTR entered per year	= 33919
Total no. of entries per year	= 115063
Total CTR entered per month	= 2827
Total no. of entries per month	= 9589
Average entries per CTR	= 3.39

As per yardstick 160 entries per man per day
No. of working days per month = 20 days
Manpower required @ 160 entries per man
per day $9589/20 \times 160$ = 2.99 men
Ch OS over all incharge = 01
The proposed requirement comes to 3.99 men.

2.8.6 CODING-II

Total CTR entered per year	= 35806
Total no. of entries per year	= 153162
Total CTR entered per month	= 2984
Total no. of entries per month	= 12764
Average entries per CTR	= 4.28

As per yardstick 160 entries per man per day
No. of working days per month = 20 days
Manpower required @ 160 entries per man
per day $= 12764/20 \times 160$ = 3.98 men
Ch OS over all incharge = 01
The proposed requirement comes to 4.98 men.

2.8.7 CODING-III

Total CTR entered per year	= 37903
Total no. of entries per year	= 160857
Total CTR entered per month	= 3159
Total no. of entries per month	= 13405
Average entries per CTR	= 4.24

As per yardstick 160 entries per man per day
No. of working days per month = 20 days
Manpower required @ 160 entries per man
per day = $13405/20 \times 160$ = 4.18 men
Ch OS over all incharge = 01
The proposed requirement comes to 5.18 men.

Summarized position of proposed staff for Coding-I, II & III sections:

Section	Proposed Staff	LR @ 12.5%	Total Staff
Coding-I	3.99	0.50	4.99 Say 5
Coding-II	4.98	0.62	5.60 Say 6
Coding-III	5.18	0.65	5.82 Say 6

2.9.0 STATISTICAL INSPECTORS:

Statistical inspectors play an important role by inspecting the statics at stations, divisions, sheds,, workshops, lobbies etc,. They give instructions to Guard, drivers, train clerks, booking parcel, goods clerk TC & TTE's etc regarding new operations strategies computerization, technological upgradations/innovations of the system. They also perform following checks/inspections at various locations.

a) *AT STATIONS:*

- i) Tri-monthly advance statement of gross earnings and traffic handled.
- ii) Monthly statement of wagons loaded with selected commodities.
- iii) Statement of marshalling yard statistics.
- iv) Statement showing detention of wagons at terminal goods stations.
- v) Statement showing detention of wagons at break-of-gauge transshipment points.
- vi) Statement showing number of unserviceable wagons and detention of damaged wagons in traffic yards and stick lines.
- vii) Statement of ineffective coaching stock in coaching sick line depots.
- viii) Preparation and submission of basic commercial documents viz Passenger Classifications (PCs), invoices etc.
- ix) Preparation and submission of basic Operating documents viz combined Drivers' and Guards' Report (CTR), Shunting Vouchers etc.

b) *IN LOCO SHEDS (DIESEL & ELECTRIC)/FUELING POINTS:*

- i) Engine utilization statement.

- ii) Statement of fuel and lubricating oil issued to engines.
- iii) Statement of fuel and lubricating oil issued for other than locomotive purpose.
- c) *IN WORKSHOPS:*
 - i) Statement of carriage & wagon performance.
 - ii) Statement of locomotive and workshop repairs.
 - iii) Statement of carriage and wagon workshop repairs.
- d) *IN DIVISIONAL AND HEADQUARTERS OFFICE:*
 - i) Tri-monthly advance statement of gross earnings and traffic handled at Headquarters Office.
 - ii) Punctuality statistics at Divisional & Headquarter Control Offices/Operating Branches.
 - iii) Engine failure statistics and engine utilization statistics at Control Offices.
 - iv) Statement of average starting wagon loads.
 - v) Passenger Revenue Statistics at EDP Centre.
 - vi) Goods Revenue Statistics at EDP Center.
 - vii) Checking in method of compilation of fundamental units in the compilation offices.

2.9.1 STAFF POSITION & DEPLOYMENT OF STAFF:-

At present the existing on roll strength of statistical inspector is 02 their deployment is given as under:-

Statistical Branch Baroda House, New Delhi	= 02
Total	= 02

2.9.2 PROPOSED REQUIREMENT OF STAFF:-

The existing on roll 02 statistical inspectors are not sufficient to cope up the existing workload of five divisions. The work study team opines that there should be one inspector for each division and one inspector for HQ to make the inspections effective.

Total requirement of Statistical inspectors comes to 6.

2.10.0 INSPECTION SECTIONS

At present one Confd. Asst. & one Draftsman is working in inspectorial section. Following work is done at inspection section of Statistical Branch Baroda House, New Delhi.

- Allotment of numerical code to the newly opened PRC, stations, sidings, division wise and state wise and correspondence there off.
- Handling of imprest money, analysis of 7A statement, generating important indices for MER every month.
- T&P items procurement, maintenance of T&P items. Attending meeting related to statistical matter.

- Analysis of data/statement generation by CTR with FOIS data. Preparation of data for Gobind Ballabh Shield, NR Zonal Shield & Efficiency shield, chasing and maintaining data for preparing GM folder every month, compilation, preparation and printing of GM pocket booklet.

2.10.1 PROPOSED REQUIREMENT OF STAFF:

For allotment of numerical code to newly open PRS, stations, sidings divisions wise and state wise, for handling imprest money, analysis of 7A statement, for Generating important operating indices for MER =01
For preparing data for various shields & put up to GM
For preparation GM folder every month

For collection of data from 4A & 4B from Diesel & Elect Disposition respectively (Division wise_ and monthly adjustment done from the tabulation received from EDPM centre like train km for passenger & Goods engine KM for pass & Goods Train hrs for Passenger Goods GTKM(I) (E), NTKM other coach for passenger loaded/empty wagon km. 01
For dealing with annual statement -1, 2, 2B, 3,4,5,7,43,8 9A, 9B, 38A, 38B, 39A, 39B, 41, 44, the other statement chased, compiled and sent to Railway Board. For compilation of divisional load which is received from Operating Branch and sent to Railway Board.

Total 02

The proposed requirement comes to 02.

2.10.2 PROPOSED REQUIREMENT OF GROUP 'D' STAFF FOR STATISTICAL BRANCH, BARODA HOUSE.

For General Section	=01
For Commercial & Optg.	=01
For coding section & R&S Section	=01
With Officer	=01
EDPM section	=01
Traffic costing	=01
Total	<u>=06</u>
LR @ 12.5%	=0.75
Total	=6.75 Say 7

The proposed requirement of Group D staff comes to 7.

2.10.3 THE SUMMARISED POSITION OF SANCTION, PROPOSED & SURPLUS/REQUIRED- POSITION OF STATISTICAL BRANCH BARODA HOUSE IS GIVEN BELOW:-

S. No	Section	S/Strength	Proposed staff	surplus
01.	Receipt & Sorting	115	06	
02.	General Section		06	
03.	Commercial Section		11	
04.	Operating Coding-I		08	
05.	Operating Coding-II		05	
06.	Coding-I		05	
07.	Coding-II		06	
08.	Coding-III		06	
09.	Inspectors		06	
10.	Inspectors Cell		02	
Total Group 'C'		115	61	54
Group 'D'		17	07	10
Grand Total		132	68	64

The above table reveals that the proposed requirement comes to 68 against the sanction strength of 132 and 64 posts in different categories and grades identified as surplus and recommended for surrender.

RECOMMENDATION NO.1

It is proposed that 68 posts in different categories and grade identified as surplus in Statistical Branch, Baroda House New Delhi and recommended for surrender as follow.

S. No.	Category	Grade in ■■■	No. of posts surplus
1	Ch. OS	9300-34800-4600	06
	OS	9300-34800-4200	29
2	Sr. Clerk	5200-20200-2800	12
3	Clerk	5200-20200-1900	07
4	Gr.D	5200-20200-1800	10
Total			64

2.11.0 STATISTICAL BRANCH JUC:

The statistical branch JUC is located in TA Office JUC and supervised by Chief Office Supdt./Statistical Branch, JUC. For the ease of work, the JUC wing is sub divided into four sections i.e.

- i) General/Admn Section.
- ii) Operating Coding-I
- iii) Operating Coding-II

2.11.1 STAFF POSITION:

S. No.	Section	S/Strength	On roll	Variation
1	General/Admn Section	41	03	
2	Operating-Coding-I		10	
3	Operating-Coding-II		11	
Total Group 'C'		41	24	17
Group 'D'		05	03	02
Grand Total		46	27	19

The above table reveals that the on roll strength is 27 against the sanction strength of 46 and 19 posts are lying vacant under the Supervision of CHOS/JUC, Statistical Branch controlled by FA&CAO/T, Baroda House New Delhi. The section wise existing staff, workload and proposed requirement of staff is discussed below:-

2.11.2 GENERAL SECTION

This section deals with the daily attendance register, leave record, seniority list, tool and plants, stationery, Pass, PTO, medical card, complementary pass, accounts inspector report and its reply, TA, tuition fees, medical reimbursement, correspondence to other office, receiving of CTR from five sheds i.e. LDH, FZR, ASR, PTK & JUC, prepare bundles and send to coding section, keep records of CTR and Entries, send statements to Baroda House, monthly payment of employees etc.

2.11.3 Staff Position & Deployment of staff:-

Ch. OS =01
O. S. =02
Total =03

2.11.4 WORKLOAD AND PROPOSED REQUIREMENT OF STAFF FOR GENERAL & ADMINISTRATION SECTION:

During the conduct of study, the workload of Pass & PTO has been taken for the F.Y. 2018-19 which is given below:-

- PASS & PTO:
PASS & PTO issued from April'18 to March'19.

1 st Class FQN	= 118
1 st Class Local	= 028
2 nd A class	= 007
2 nd Class foreign	= 008
2 nd Class Local	= 002
PTOs	= 016
Duty Passes	= <u>152</u>
Total	= <u>331</u> per year

Avg. working days per month taken = 20 days = 20x12=240 days/yr

Avg. Pass, PTO per day=331/240=1.37 pass & PTO per day

From the perusal of the above it has been observed that the workload of pass & PTO is meager which comes to 1.37 pass/PTO/day some other work should be assigned to this seat.

Description of work	Proposed Requirement of staff
Overall incharge of section to supervise the work of section.	01
Correspondence work, union matters, daily attendance register, T & P, stationary and other works like timely submission of statements to Hq.	01
NOC of passport, MACP & leave encashment, Salary Bills of staff PF, Settlement/PPO cases, implementation of MACP, Child education allowance, vetting of TA bills, Deduction of Income Tax, PLB, leave encashment and other matters of officers.	01
Preparation of pass & PTO, family identity card for retired employees, medical cards, dak receipt & dispatch etc.	01
Total	04
LR @ 12.5%	0.5
Total	4.5 say 05

2.11.5 OPERATING CODING-I & II SECTION- JUC:-

CTR are received from different sheds/lobbies in which informations/data are filled by the driver & Guard. These informations/data are compiled in form ST-62 and sent to EDP Centre, for tabulation. At this form ST-62 zone code, gauge code, traction and month is mentioned. As per prevailing practice entries are done @ 160 entries per man per day. This form consists of the following informations:-

- 1) Date:
- 2) Engine No: - Mention in 5 digits and code is provided to every type of engine.
- 3) Engine weight: - weight is considered engine code wise.

- 4) Home shed: - Engine home shed code is mentioned.
- 5) Direction: - Up & Down, for UP=01, Down=02.
- 6) Division: - The train covered distance from to the no. of division may be one or more through which it is passed.
- 7) Service:- Means, Mail, Exp, passenger, goods, special
 For special mail trains code =20
 For passenger trains code =21
 For goods trains code =30
- 8) Service kilometer: - The distance covered by the train/engine.
- 9) Service hours: - The time consumed in covering the distance in that division.
- 10) Other Engine hours: - The time taken before and after working of the train.
- 11) Shunting in route: - If shunting is done in route, then its hours are mentioned.
- 12) Shunting before or after: - If shunting is done before or after the movement of the train, then it is mentioned.
- 13) Net metric tonne: - This column is filled when goods train is in running, otherwise, this column is kept blank.
- 14) Coaches:- This column is filled only when passenger train is running and no. of coaches are written in double.
- 15) Joint Brake Van & SLR: - After running of the passenger train, the no. of brake van & SLR are written in double.
- 16) Other coaching vehicle: - if other coaching vehicle is attached, it is also mentioned.
- 17) Covered wagon: - If goods item are loaded in wagons and wagons are covered, then the no. of wagons are written in double.
- 18) Empty covered wagon: - Only the no. of wagons are written.
- 19) Loaded open wagon: - If wagons are loaded in uncovered wagon, then the no. of open loaded wagons are written in multiple of 2.5.
- 20) Empty open wagon: - Only the no. of empty wagons are written.
- 21) Other stock: - If other any type of wagon is attached with Goods Train then their quantity is written only.
- 22) Brake Van: - The no. of brake van attached to goods train only their quantity is written.
- 23) Fuel consumption: - The diesel consumed in operation of train or only by engine itself, is mentioned.

2.11.6 STAFF POSITION & DEPLOYMENT OF STAFF: - The section wise on roll existing staff is as under:-

Section	Ch. OS	OS	Sr. Clerk	Clerk	Total
Coding-I	01	09	--	--	10
Coding-II	01	08	02	--	11
Total	02	17	02	--	21

2.11.7 WORKLOAD OF OPERATING CODING-I & II SECTION JUC:
For the FY Year 2018-19 (12 months)

Section	Total CTR entered	Total Entries Per Annum	Total Entries Per Month	Avg. no. of entries per CTR
Coding-I	75005	318360	26530	4.24
Coding-II	91784	317133	26428	3.46
Total	166789	635493	52958	3.85

The above table reveals that the total entries come to 52958 per month.

As per prevailing practice one man does 160 entries per day.

On roll staff strength is 21

Total entries should be $21 \text{ men} \times 160 \text{ entries} \times 20 \text{ working days} = 67200$ entries per month.

This shows under utilization of manpower. During discussion it was apprised that there are only 03 computer installed in coding section to facilitate the coding process. Computerization certainly enhances the productivity of the coding section. Before computerization the prevailing practice was @160 entries per man per day, but at present after introduction of computer era, the entries per man per day must be more than 160 entries.

Data compilation work of statistical deptt can be made easy, comfortable and fast if the different statements, CTR and other data be submitted on line by division in the era of computerization which will be enhance the man power productivity and efficiency of Railway working.

2.11.8 PROPOSED REQUIREMENT OF STAFF:

The team visited coding section, I & II and interacted with the Ch. OS incharge to know about the working procedure. It was apprised that CTR (Combined Train Reports) are received in this office from different sheds/lobby wise of N.Rly. Some heads of these CTR i.e., Engine No., type of engine, home sheds, station from to station, load gauge & traction etc. are taken for entries in ST-62 (Code sheet for operating statistics) to prepare operating & commercial statistics. The workload shown in above table shows total entries in the year 2018-19 was 635493 nos. As per prevailing practice @ 160 entries per man per day, work being done by this section, the work study team has assessed the requirement of staff on the basis of actual work done. Section wise proposed requirement of staff assessed as under:

2.11.9 FOR CODING-I:

Total CTR entered per year	= 75005
Total no. of entries per year	=318360
Total CTR entered per month	= 6250
Total no. of entries per month	= 26530
Average entries per CTR	= 4.24

As per yardstick 160 entries per man per day
 No. of working days per month = 20 days
 Manpower required @ 160 entries per man
 per day = $26530/20 \times 160$ = 8.29 men
 Ch OS over all incharge = 01
 The proposed requirement comes to 9.29 men.

2.11.10 CODING-II

Total CTR entered per year	= 91784
Total no. of entries per year	= 317133
Total CTR entered per month	= 7649
Total no. of entries per month	= 26428
Average entries per CTR	= 3.46

As per yardstick 160 entries per man per day
 No. of working days per month = 20 days
 Manpower required @ 160 entries per man
 per day = $26428/20 \times 160$ = 8.25 men
 Ch OS over all incharge = 01
 The proposed requirement comes to 9.25 men.

Section	Proposed Staff	LR @ 12.5%	Total Staff
Coding-I	9.29	1.16	10.45 Say 10
Coding-II	9.25	1.15	10.40 Say 10

2.11.11 The summarized position of the sanctioned, proposed and surplus posts of all the JUC is given below:-

S. No	Section	S/Strength	Proposed staff	surplus
1	General Section	41	05	
2	Coding-I		10	
3	Coding-II		10	
Total Group 'C'		41	25	16
Group 'D'		05	03	02
Grand Total		46	28	18

The above table reveals that the proposed requirement comes to 28 against the sanction strength of 46 and 18 posts in different categories and grades identified as surplus and recommended for surrender.

RECOMMENDATION NO. 2

It is proposed that 18 posts in different categories and grade identified as surplus in Statistical Branch, Traffic Account Office JUC and recommended for surrender as follow.

S. No.	Category	Grade in ■■■	No. of posts surplus
1	OS	9300-34800-4200	05
2	Sr. Clerk	5200-20200-2800	06
3	Clerk	5200-20200-1900	05
4	Gr.D	5200-20200-1800	02
Total			18

3.0.0 FINANCIAL IMPLICATIONS:

After the implementation of the work study recommendations following are the financial implications.

Branch	S N	Category	Grade in ■■■	Recom. No	No. of posts surplus	Monthly value per posts in ■■■	Anticipated annual recurring saving Rs. ■■■
Statistical Branch BH NDLS	1	Ch. OS	9300-34800-4600	1	06	109571	7889112
	2	OS	9300-34800-4200	1	29	86463	30089124
	3	Sr. Clerk	5200-20200-2800	1	12	71078	10235232
	4	Clerk	5200-20200-1900	1	07	48614	4083576
	5	Gr D	5200-20200-1800	1	10	43817	5258040
Statistical Branch BH JUC	1	OS	9300-34800-4200	2	05	86463	5187780
	2	Sr. Clerk	5200-20200-2800	2	06	71078	5117616
	3	Clerk	5200-20200-1900	2	05	48614	2916840
	4	Gr D	5200-20200-1800	2	02	43817	1051608
	Total				82		71828928

No. of posts identified as surplus: -

Group 'C' = 70 posts

Group 'D' = 12 posts

Total = 76 posts

Anticipated recurring saving = ■■■718.28 lakh per annum

Capital saving = Nil

Total saving = ■■■718.28 lakh per annum

4.0.0 PRODUCTIVITY

4.1.0 The total annual expenditure on the sanctioned strength of Statistical staff of two wings of Statistical Branch staff working under the administrative control of FA&CAO/T/New Delhi is tabulated as under:-

S N	Category	Pay Scale + Grade Pay	Monthly value per posts in ■	Sanctioned strength	Total annual expenditure on the sanctioned strength in ■
1	Ch. OS	9300-34800-4600	109571	32	42075264
2	OS	9300-34800-4200	86463	84	87154704
3	Sr. Statistical Inspector	9300-34800-4600	109571	04	5259408
4	Statistical Inspector	9300-34800-4200	86463	02	2075112
5	Sr. Clerk	5200-20200-2800	71078	20	17058720
6	Clerk	5200-20200-1900	48614	14	8167152
7	Gr.D	5200-20200-1800	43817	22	11567688
Total				178	173358048

The above table reveals that ■173358048/- is being spent on the sanctioned strength every year.

4.1.2. The annual expenditure on the proposed staff working under FA&CAO/T New Delhi is tabulated as under:-

S N	Category	Pay Scale + Grade Pay	Monthly value per posts in ■	Proposed staff	Total annual expenditure on the Proposed Staff in ■
1	Ch. OS	9300-34800-4600	109571	26	34186152
2	OS	9300-34800-4200	86463	50	51877800
3	Sr. Statistical Inspector	9300-34800-4600	109571	04	5259408
4	Statistical Inspector	9300-34800-4200	86463	02	2075112
5	Sr. Clerk	5200-20200-2800	71078	02	1705872
6	Clerk	5200-20200-1900	48614	02	1166736
7	Gr.D	5200-20200-1800	43817	10	5258040
Total				96	101529120

The above table reveals that after the implementation of the work study report, the expenditure on the proposed staff will come to ■ 101529120/-. Therefore the expenditure will be reduced from ■173358048/- to ■ 101529120/-.

LIST OF ANNEXURES

S.N.	Description	Annex. No.
1	Authority Letter to conduct the work study report No. 16-CP/03/WS/2015-16 dt. 20/04/2015.	I
2	Statement showing category and grade wise staff position of statistical branch of all the three wing	II
3	Statement showing detail of monthly statistical statements.	III
4	Statement showing details of Annual statistical statements.	IV
5	Statement showing details of statistical statement prepared by operating II Section.	V

WORK STUDY REPORT DETAILED CHART

Department : - Statistical Branch

Name of study : - Review of staff working under Statistical Branch Baroda House
NDLS & JUC

Activity Centre : - Statistical Branch. Baroda House NDLS & JUC

SN	Sub activity	Actual staff deployed	Work recommendation	Brief description of workload
1	Statistical Branch at Baroda House, New Delhi & JUC	SS = 178 OR = 101 Vac = 77	SS = 178 Proposed = 96 Surplus = 82 (Gr C-70, Gr D-12)	Compilation of data information received from all 5 divisions of Northern Railway like lobbies, sheds, workshops, yards, marshalling yards etc. and preparation of various statements.

Annexure No.II

- A) Category wise & Grade wise sanction, on roll and vacancy position of staff working in Statistical Branch Baroda House.

S No	Category	Grade Pay in Rs & Pay level	S/S	O/R	Vacancy
1	Sr Statistical Inspector	9300-34800-4600 (L-7)	04	02	--
2	Statistical Inspector	9300-34800-4200 (L-6)	02	--	-02
3	Ch. Office Supdt	9300-34800-4600 (L-7)	29	24	-05
4	Office Supdt	9300-34800-4200 (L-6)	59	35	-24
5	Sr. Clerk	5200-20200-2800 (L-5)	12	04	-08
6	Clerk	5200-20200-1900 (L-2)	09	02	-07
7	Group D	5200-20200-1800 (L-1)	17	07	-10
Total			132	74	-58

- B) Category wise & Grade wise sanction, on roll and vacancy position of staff working in Statistical Branch Traffic Account Office JUC.

S No	Category	Grade Pay in Rs & Pay level	S/S	O/R	Vacancy
1	Ch. Office Supdt	9300-34800-4600 (L-7)	03	03	--
2	Office Supdt	9300-34800-4200 (L-6)	25	19	06
3	Sr. Clerk	5200-20200-2800 (L-5)	08	02	06
4	Clerk	5200-20200-1900 (L-2)	05	--	05
5	Group D	5200-20200-1800 (L-1)	05	03	02
Total			46	27	19

- C) Grand total (A+B) staff working in Statistical Branch Baroda House and Statistical Branch Traffic Account Office JUC.

Category	S/S	O/R	Vacancy
Group 'C'	156	91	65
Group 'D'	22	10	12
Total	178	101	77

MONTHLY STATISTICAL STATEMENTS SENT TO RAILWAY BOARD.

S.N	Statement No.	Particulars	Due date of submission
1	1A	Passenger train performance punctuality statistics	20 th of every following year
2	1B	Passenger train performance train KMS/ Hrs and vehicle usage	-do-
3	2	Goods train performance train kms/hrs and wagon usage	-do-
4	3A	Passenger & Goods train performance net & gross performance	-do-
5	3B	Goods train performance Van & shunting performance	-do-
6	4A	Rolling stock performance engine usage	-do-
7	4B	Rolling stock performance vehicles & wagon on line/in use & ineffective	-do-
8	5A	Fuel & Energy statistics SFC/SEC rate per 100 GTKM & engine km	-do-
9	5B	Lubricating oil statistics consumption per 100 engine kms & 1000 V/W kms.	-do-
10	6A	Passenger revenue statistics org/carried pass. PKM, carried earning AV lead/rate	60 days after the close of the month
11	6B	Parcel traffic statistics weight, earnings, NTKM of parcel & luggage	21 st of every following month
12	7A	Goods revenue statistics(plan head commodities)	8 th of every following month
13	7B	Goods Res. Non Rev. statistics (all commodities) org. loading, tones, earnings, NTKM, lead & Rate.	20 th of every following month
14	7C	Commodity statistics carried tones, earnings, NTKM, lead & Rate.	45 days after the close of the month.
15	8	EMU/MEMU/DMU/DHMU/performance operating & commercial performance	20 th of every following month
16	9 Part-I NG 9 Part-II NG	Train performance Similar to 1A, 1B, 2 Train performance Similar to 3A, 3B, 4A & 4 B	20 th of every month -do-
17	14	Marshalling yard statistics wagons dealt with & detention to wagons.	-do-
18	15	Goods terminal statistics wagons dealt with & detention to wagons.	-do-
19	19	Fundamental information Relating to monthly statements No. 1B to 4B	-do-
20	ST-C2	Commodity loading statement loading, TPT, repacking, milty, RMC in break p of heavy & light.	15 th of every following month
21	Monthly	Reports sent to LRB by GM (Prepared by statistical Branch)	
22	MER	Monthly Evaluation Report covering almost all facts of Railway operation	10 th of every following month

ANNUAL STATISTICAL STATEMENT SENT TO RAILWAY BOARD

S.N	Statement No.	Particulars	Due date of submission
1	1 Books	Financial statements, Fundamentals of OR & Net gain/loss on capital	31 st Aug of every following year
2	2A Books	Capital-At-Charge, Capital outlay and capital at charge	-do-
3	2B Books	Capital outlay, Capital outlay of Branch lines	-do-
4	3 Budget	Investment from different sources, Capital loan account, DRF Development & Safety etc.	-do-
5	4 Books	Working expenses, Grant wise working expenses & Total working expenses	-do-
6	5 Books	Revenue earnings & Expenses, Fundamental of OR & Net gain/loss on capital	-do-
7	6	Detail of Gross earnings, From coaching, Goods	-do-
8	7 Books	Details of working expenses From coaching, goods and misc.	30 th Sept' of every following year
9	8 CTE	Kilometerage statement Route/track and equated track kilometer	31 st July of every following year
10	9A CTE	Mean kilometerage statement No. of stations, gradients & curvature etc.	15 th May of every following year
11	9B	Number of stations classified Interlocked, Block, Flag, Halt & Out agency etc.	-do-
12	10A CME	Locomotive & rail cars in service tractive & horse power	30 th June of every following year
13	10B CME	Coaching stock (Excl. EMU) in service class-wise, no. of vehicle, seat & Berths	-do-
14	10C CME	Goods stock in service, No. in units/Four wheelers (Type wise) & Avg. capacity.	-do-
15	10D CME	Goods stock in service (NG) including, rail car nos. of units/four wheelers (Type wise) & Avg. capacity.	-do-
16	12	Passenger revenue statics incl. EMU No. of pass org./carried, PKM, carried NTKM & earnings.	31 st Aug of every following year
17	13	Goods Revenue statistics, No. of tones org. & carried, carried NTKM & earnings.	-do-
18	15 TC	Results of working of CHG & goods services cost of hauling a chg. & Goods traffic for different units.	30 th Sept of every following year
19	16	Tonnes kilometerage (Traction wise) NTKM & GTKM for pass. & Goods (Incl./Excl. wt. of engine)	31 st Aug of every following year.
20	17	Train/Engine kilometerage (Traction wise) passenger/goods (LIE, AR, ANR, Deptt. shunting & total)	15 th May of every following year.
21	18	Train/Engine hours (Traction wise) Passenger/ Goods (LIE, AR, ANR, Deptt. Shunting & Total)	-do-
22	19A	Vehicle & Wagon kilometers (Traction wise) PCVS/OCVS, % age of loaded to total	-do-
23	19B	Goods train performance (Traction wise) details of through & Van (Wagon & Local)	31 st Aug of every following year.
24	20	Speed of goods trains (Traction wise) Details of through & all (S/L,D/L & Total)	15 th May of every following year.

