

दक्षिण पूर्व मध्य रेलवे
SOUTH EAST CENTRAL RAILWAY

कार्यालय
वरिष्ठ उपमहाप्रबंधक, बिलासपुर



Office of the
Sr. Dy. General Manager, Bilaspur.
Tel.No. 64006(Rly), 07752-414229

पत्र सं. No WS/Chg. Depot/BSP/ 1831

दिनांक Dated: 30.12.2020

Divisional Railway Manager,
S.E.C. Railway,
Bilaspur.

Sub : **Work study on "Review of existing cadre strength vis-a-vis workload of Coaching Depot/Bilaspur under Mechanical Department in Bilaspur Division."**

Ref. [1] This Office Letter No. WS/Chg. Depot/BSP/1507 dated 13.10.2020 (Study No.-SEC/10/2020-21).

[2] Sr. DME Office Letter No.- Mech./BSP/CD/WS/01 dated 02.11.2020.

[3] This Office Letter No. WS/Chg. Depot/BSP/1773 dated 14.12.2020.

The Work study of Coaching Depot (Mechanical Deptt.)/BSP was conducted to review the existing Cadre strength vis-a-vis workload in view of Outsourcing, Modernization, Multi-Skilling, Need base Requirement and Optimum utilization of Manpower. The draft report of Coaching Depot/BSP was sent to Office of the DRM/BSP vide letter under reference at [1] dated 13.10.2020 for offering remarks.

Remarks on the above mentioned Draft report was received by this office from Sr. DME/BSP's Office vide letter under reference [2] and after reviewing the remarks, reply was sent to DRM/BSP along with copy to Sr. DME/BSP & Sr. DPO/BSP vide letter under reference [3] dated 14.12.2020. Further, no remarks has been received so far. Hence, the above mentioned Draft report finalised without making any change in recommendations made in the report.

The Study report contains recommendation for surrender of 24 surplus vacant posts of Technician/ Artisan category from Coaching Depot/BSP of Mechanical Department of Bilaspur Division.

Therefore in view of above, it is requested that suitable instructions may be given to concerned officers for implementation of the above cited Work Study report and copy of surrender memorandum may be sent to this office so that progress of implementation of work study can be advised to Railway Board accordingly.

This has the approval of SDGM.


(S. N. Pattnaik)

Asst. Work Study Officer
For-Sr. Deputy General Manager

Encl: 1 work study report.

Copy is forwarded to:-

- 1) The Executive Director, E&R (ME), Railway Board for kind information.
- 2) Secretary/SECR for kind information of GM.
- 3) CME SECR/ BSP for information and necessary action.
- 4) Sr.DME/BSP, Sr. DPO/BSP for information and necessary action.



SOUTH EAST CENTRAL RAILWAY

WORK STUDY CELL

Work study report on
Review of existing Cadre Strength
vis-a-vis Workload of
Coaching Depot/ BSP (Mechanical Deptt.)
in Bilaspur Division
OVER S.E.C. RAILWAY



WORK STUDY CELL
S. E C. RAILWAY
BILASPUR

STUDY NO.
SEC/10/2020-21

SOUTH EAST CENTRAL RAILWAY

WORK STUDY REPORT

ON

Review of existing Cadre Strength
vis-a-vis Workload of
Coaching Depot, BSP (Mechanical Deptt.)
in Bilaspur Division

OVER S.E.C. RAILWAY

GUIDED BY

Shri AMIT KUMAR SINGH
SR.DY. GENERAL MANAGER

LED BY

Shri S. N. PATTNAIK,
ASTT. WORK STUDY OFFICER

CONDUCTED BY

Shri V. K. SINHA
CH. WORK STUDY INSPECTOR

Shri S. K. MISRA
WORK STUDY INSPECTOR

WORK STUDY CELL
S. E. C. RAILWAY, BILASPUR

STUDY No.
SEC/10/2020-21

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SUMMARY OF RECOMMENDATIONS & SUGGESTIONS

S#	Descriptions	Para Reference
<u>RECOMMENDATIONS & SUGGESTIONS :-</u>		
	On being summarized all the facts, the Work Study Team have derived following Recommendations & Suggestions in connection of present Sanctioned strength, Existing deployment and Proposed requirement of staff for Coaching Depot/Bilaspur which are as under:	3.7
RECOMMENDATIONS:		
1.	It is recommended that 24 vacant posts of Technician/Artisan Category , identified as surplus to the need based requirement of manpower for Coaching Depot/BSP, should be surrendered to achieve efficiency & economy whereas the total sanctioned strength is 478, actual strength is 454 (436+18), existing vacancy is 24 and the proposed requirement of Staff strength is 454.	3.7.1
2.	It is recommended that some Non-core Activities of Coaching Depot/BSP (being carried out Departmentally) such as Welding work, Plumbing /Pipe Fitting Work, Trimming Work, Painting of coaches should be outsourced and cadre to be reduced accordingly.	3.7.2
SUGGESTIONS		
3.	<u>SUGGESTION:-</u> To enhance the potentiality of the employees, it is suggested to make arrangement for imparting necessary Training/Learning with provision of modern Tools & Plants to make them able to discharge their duties/responsibilities effectively as there is always important to be upgraded as per requirement.	3.7.3

CHAPTER-I

1.0 INTRODUCTION:

Indian Railways (IR) is the nation's transport lifeline and India's largest transporter connecting, integrating the country and moving men and materials from one place to another. Railways are economical and environmental friendly mode of transport.

Mechanical department plays a very important role in Indian Railways. This department works in coordination with all other departments of the Railways for effective utilization of rolling stock for timely movement of traffic. C&W wing of Mechanical department is responsible for coach/wagon maintenance like primary maintenance, secondary maintenance, enroute train passing, turn around attention, terminating/originating (inclusive of cleaning and examination at platform but excluding exterior dry cleaning of turnaround trains), sick line attention, cleaning & complete washing, only interior dry cleaning, Train watering, material storage / Accountable, linen management, train escorting staff, waste disposal, pit line sweeping and drain cleaning, security and locking of rakes, ART maintenance etc.

The study of Coaching Depot, Bilaspur has been undertaken to review the requirement of staff vis-à-vis existing workload in view of Outsourcing, Modernization, Multi-Skilling, Need base Requirement and Optimum utilization of Manpower.

Due to modernization in every sphere of railway working, modern coaches like LHB coaches and equipments have been introduced to increase the productivity in the series of modernization, many electronic, automatic equipment, like vacuum cleaners, surface cleaner, mopeds, wipers etc. have been introduced in the field of cleaning activities which has resulted in improved quality and standard of cleanliness and minimized the maintenance time and manpower.

The main objective of work-study is to assess the need based requirement of manpower in present scenario through observations of data & records and critical analysis so that the goal of high productivity, efficiency and economy may be achieved.

1.1 Methodology:

The following methodology has been adopted for conducting the study:

- I.** Collection of relevant field data,
- II.** Examination of records
- III.** Direct observations
- IV.** Interaction with staff and Supervisors
- V.** Critical Analysis of data and the assessment of requirement of man power on need basis wherever applicable.
- VI.** Effect of modern technologies equipments, likely changes in the near future in the quantum of activities and improvements

1.2 TERMS OF REFERENCE:

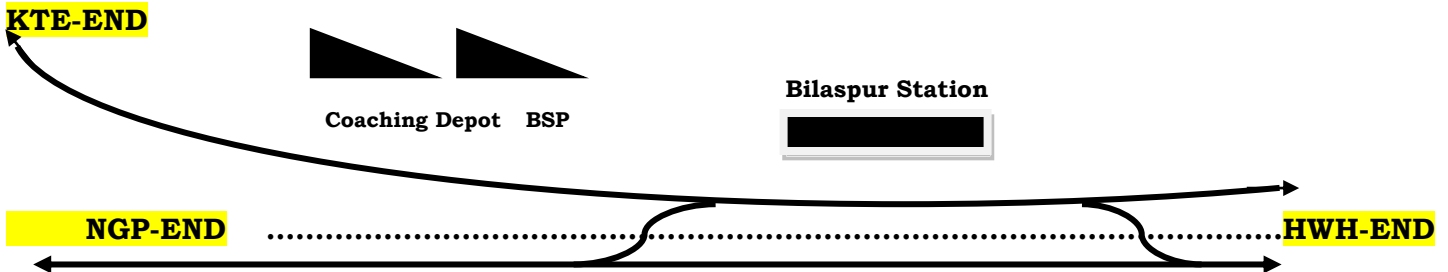
The following terms of reference have been adopted to conduct the study:-

- I.** To review staff strength vis-à-vis existing workload.
- II.** To suggest ways and means to identify redundant/unproductive activities to eliminate wastages expenditure.
- III.** To suggest ways and means to improve the system economically in view of modernization and system development.

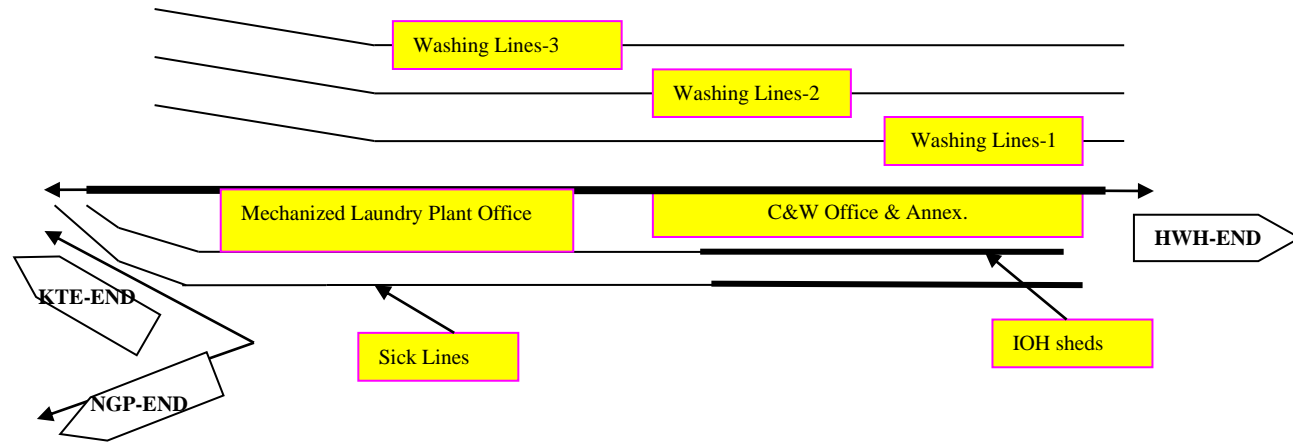
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The Coaching Depot/BSP is situated approx. 3 km from Bilaspur Railway station towards Nagpur on Howrah-Mumbai trunk route. It is one of the major Coaching Depots functioning under the jurisdictions of Bilaspur division over South East Central Railway.

I. Location of Coaching Depot, BSP

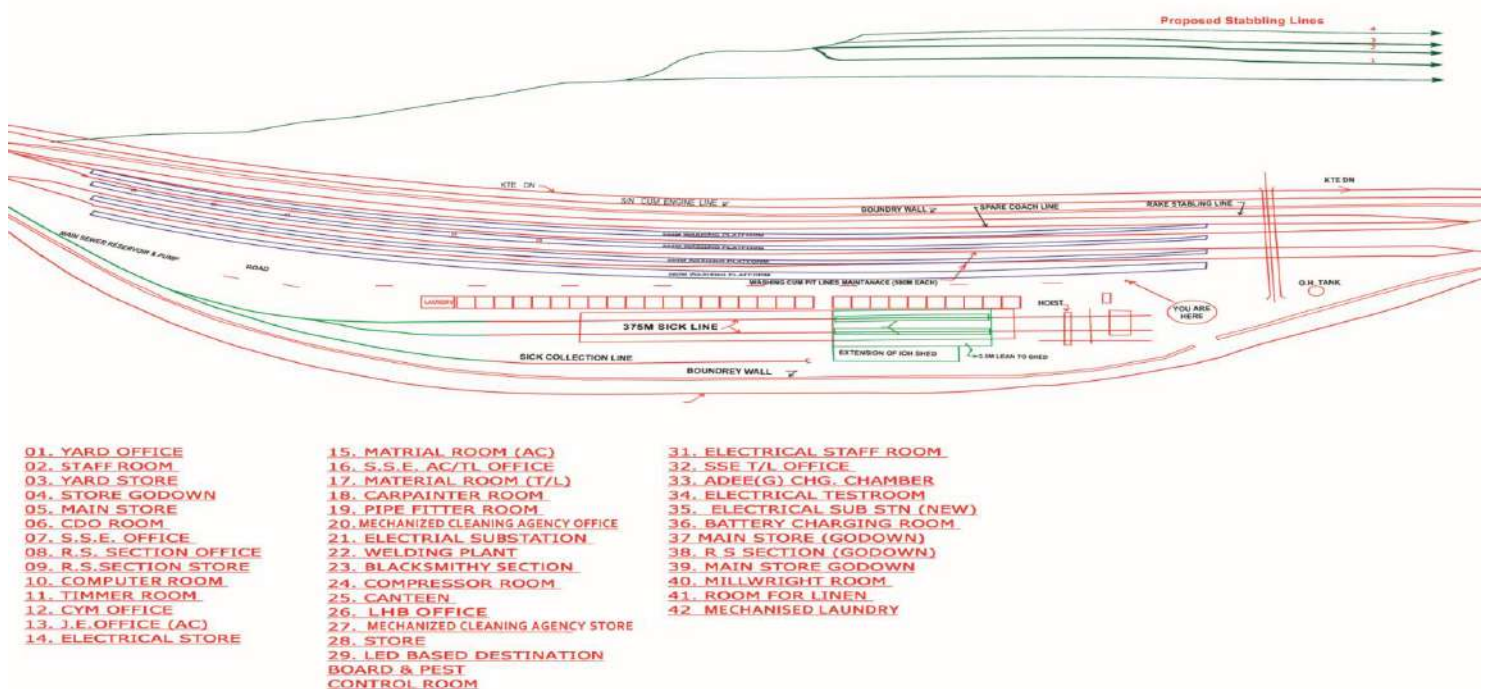


II. Schematic Diagram of Coaching Depots' Premises



1.4 Existing Lay out of Coaching Depot, Bilaspur.

LAY OUT OF COACHING DEPOT BILASPUR

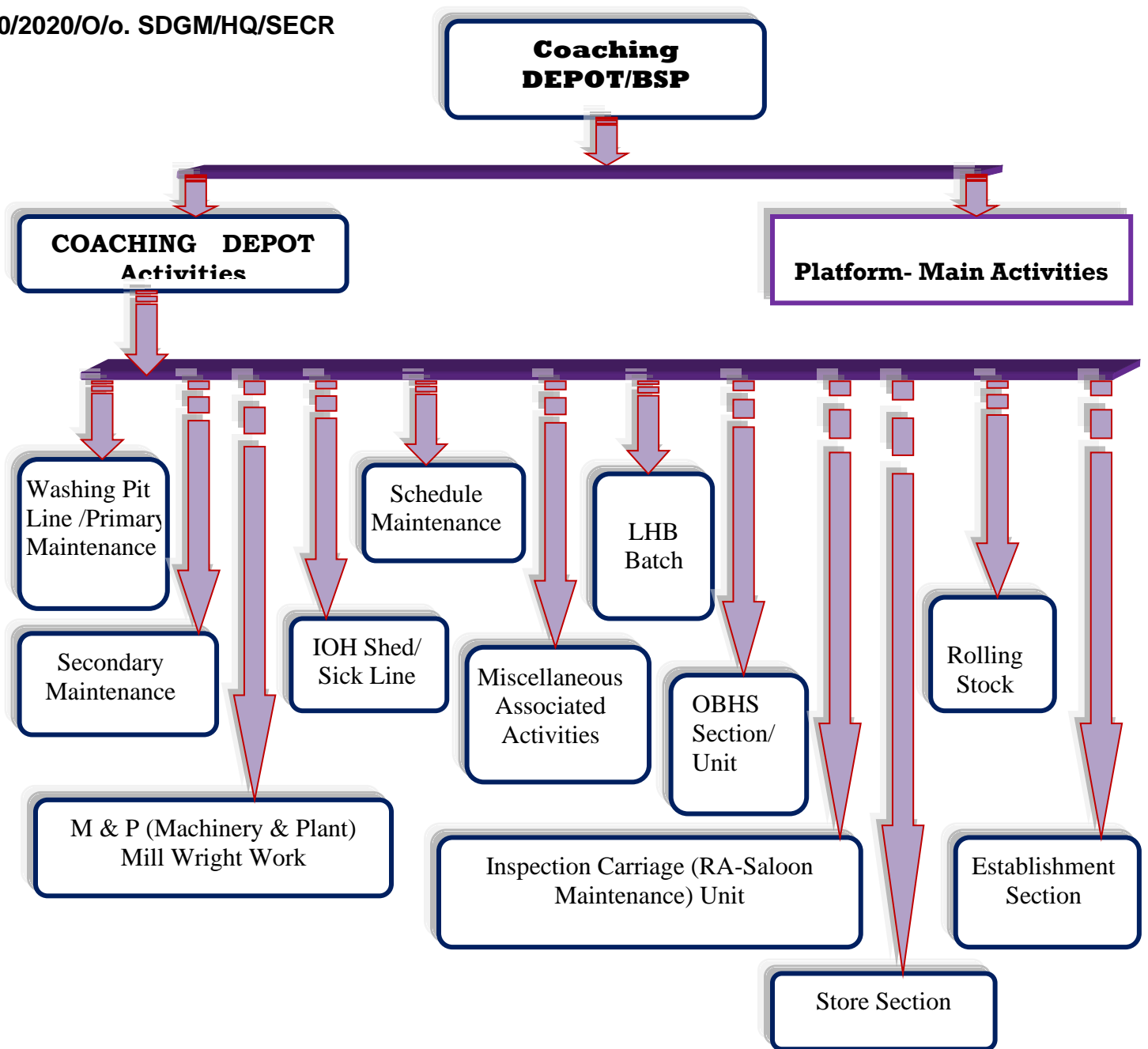


1.6 **Organisational & Administrative (Functional) Set-up:**

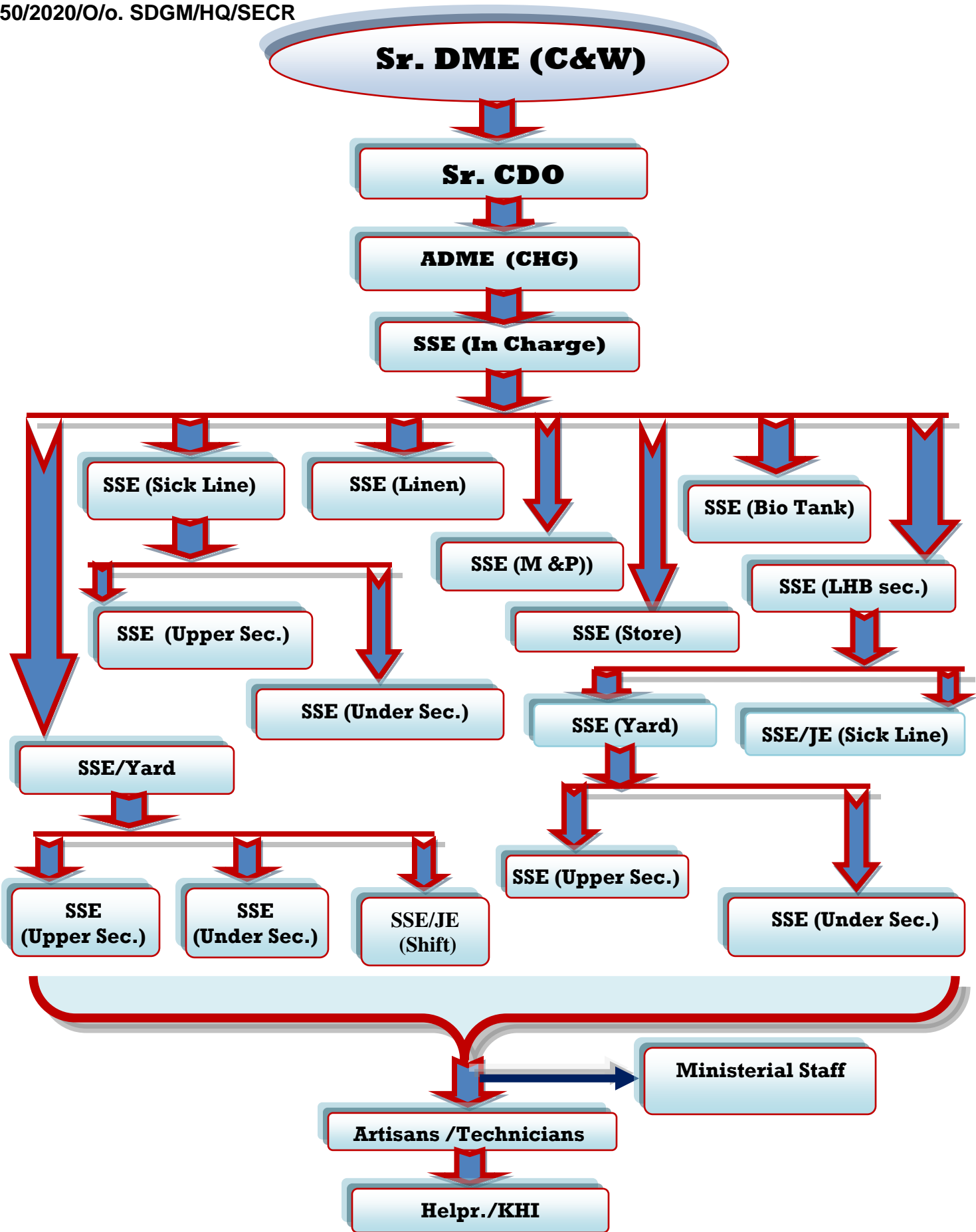
Coaching Depot comprises of various sections functioning for maintenance of Coaches and Bogies. Coaching Depot organization is headed by Sr. DME (C&W.)/BSP who governs the working of this Depot and assisted by Sr. CDO and ADME (Coaching). Coaching Depot is mainly meant for maintenance of Coaching Stock along with carrying out the respective activities related to Washing Line, Sick Line, Yard duty/Platform Train Duty and Intermediate Overhauling (IOH) work. For supervising and carrying out the routine work promptly, a team of staff consisting SSEs/JEs, Ministerial staff, Artisan and Khalashi/Helpers have been deployed.

1.6.1 **Organisational Chart:**

Organisational set-up of Coaching Depot, Bilaspur can be represented as below:



1.6.2 Administrative (Functional) Chart for Coaching Depot/BSP:



87950/2020/17-SDCM/10/SECR

Infrastructural Facilities available at the Coaching Depot/Bilaspur are as under :-

S#	Facilities/Items	Details	Utilized for
1.	Washing Line	Total 03 nos. pit lines available in the complex W/L no. -1- 26 Coaches, Length 580 m W/L no. -2- 26 Coaches, Length 580 m W/L no. -3- 26 Coaches, Length 580 m	Examination of Primary & Secondary trains & Schedule attention of coaches.
2.	Sick Line	Total 02 nos. Sick lines available in the complex.S/L no.-1- 13 Coaches, Length 370 m S/L no.-2- 13 Coaches, Length 370 m	Attention of sick coaches
3.	Pit Line (Sick Line)	Total 02 nos. Pit Line (Sick lines) available in the Complex S/L no.-1- 03 Coaches, Length 100m. S/L no.-2- 03 Coaches, Length 100 m	Attention of IOH, Wheel changing, Spring changing, dyno defect
4.	Holding Stabling Line	Total 02 nos. Holding Stabling Line available in the complex- H/S Line.-1 – 24 coach capacity, Length 540 m H/S Line.-2 - 24 coach capacity, Length 540 m	For stabling of fit rakes or awaiting of examination rakes
5.	IOH Shed	Total-01 no IOH Shed with 03 Coaches Capacity, Length 100 m	Attention of IOH,Wheel changing, Spring changing, dyno defect
6.	Hydrant	Total 04 nos hydrant lines available.Each line is provided with 85 nos. of hydrant valves.	For cleaning & watering of coaches
7.	Lifting Arrangement	Total 17 working lifting jacks are available. EOT is under repair. 01 set (4 nos.) synchronized jack is available.	Lifting of Coach body, unloading & loading of wheels & trolleys by EOT
8.	Welding facility	Welding points are available in yard pit line in entire length. 03 Nos. of Welding plants are available for welding work in yard & 2 plants sick line.	Welding work in coaches
9.	Air Compressor	Total 03 compressors (1 Diesel & 2 Electric) are available. Air Brake rake testing rig is available at both-end of line no.1 at yard. Compressed air available for SCTR at line no. 01.	For Air brake testing of Rake or a single coach
10.	Shed Area	100 meter length of line no 1 & 2 of sick line is covered by shed with 7 meter space in between line no1 & 2.	IOH shed
11.	Panting /Carpentry & Trimming	These facilities are available and used during maintenance whenever require.	Coach Maintenance
12.	Air- hose testing	It is innovated at the same coaching complex and tests Air-hose pipes at air-pressure of 10 kg per sq.cm.	For ensuring leak proof air hose.
13.	Whiting Jack	26 nos.	Utilized in routine maintenance work.
14.	Jumbo Jack	06 nos.	
15.	Hoist Crane	03 nos.	
16.	EOT Crane	02 nos.	
17.	Rake test rig	03 nos.	
18.	SCTR	04 nos.	
19.	Welding Machine	14 nos.	
20.	Lathe Machine	03 nos.	
21.	Drilling Machine	02 nos.	
22.	Road Mobile crane	02 nos.	
23.	Fork lifter	03 nos.	
24.	Air Compressor	04 nos.	
25.	Bottle Crusher	01 no.	
26.	Wheel Lathe machine	01 no.	

87950202076-3DEM/HQ/SECR Classification of Coaching Maintenance Depots:

According to number of based coaches (holding Capacity), depot is classified into three categories.

S#	Depot	Number of based coaches
1	Minor	50 to 100
2	Medium	100 to 250
3	Major	Above 250 (Coaching Depot, BSP belongs to this Category)

1.9 Type of Coaches:

Mainly two types of Coaches namely I.C.F. & L. H.B are maintained at Coaching Depot, BSP. The comparative features of these two Coaches are as under:

S#	Parameters	Integral Coach Factory	Linke-Holmann-Busch (Alstom)
1	Ride Index ¹	2.6 at 160 kmph in vertical modes and 3.4/3.5 at 160 kmph in lateral mode	2.5 but not exceeding 2.75 both in vertical & lateral modes
2	Economic Advantage	Tested speed of max 160 kmph	Tested speed of max 180 kmph
		Service speed of max 130 kmph	Service speed of max 160 kmph
		Very high oil leakage	No problem of that sort at all
3	Economic Advantage	Intermediate Overhauling (IOH) 9 months or 2 lakhs km	Tested speed of max 180 kmph
		Periodic Overhauling (POH) 18 months or 4 lakhs km	Service speed of max 160 kmph
		Regular coats of paint required	No problem of that sort at all
4	Maintenance	Intermediate Overhauling (IOH) 9 months or 2 lakhs km	Tested speed of max 180 kmph
		Periodic Overhauling (POH) 18 months or 4 lakhs km	Service speed of max 160 kmph
		Regular coats of paint required	No problem of that sort at all
5	Bogie Frame	Box type with headstock	H-type chasis without headstock.
6	Wheel and Axle	Wheel base - 2896 mm	Wheel base - 2560 mm thus improved ability to negotiate curves
		Max distance between inner wheels 11887 mm	Max distance between inner wheels 12345 mm
7	Bearing Arrangement	Spherical roller bearing	Cartridge Tapered roller bearing which in turn needs lesser maintenance
8	Bogie Frame-Axle Joint	Rigid	Articulated by control arm
9	Primary Suspension Unit	Coil springs with dashpot level	Coil springs are nested with hydraulic damper & control arm
10	Secondary Suspension Unit	Secondary springs on lower spring beam through hangers	Secondary springs directly mounted on the sides of frames
11	Bogie Body Joint	Through center pivot	Through pivot assembly on transverse beam & bracket on doom
12	Brake system	clasped type brake	Axle mounted disc brake
13	Maintenance requirement in POH	Axle guide arrangement	Axle guide arrangement
		Spherical Roller Bearing	Spherical Roller Bearing
		Clasp brake	Clasp brake
		More Pin Joints	More Pin Joints
14	Anti-rolling arrangement	Not provided	Provided

CHAPTER-II

2.0 OBSERVATIONS :

2.1 Consolidated Staff strength :

The consolidated cadre strength of Coaching Depot/Bilaspur as furnished vide Sr. DPO/BSP's letter no. E/SA/Mech/C&W/ Cadre Position dated 28.05.2020 and as per data collected during the course of Work Study is as under:

S#	Category	Design.	Pay Scale	GP	Sanc.	Act.	Vac	Actual Deployment-Break up			
								Depot		PF	Other
								Sick Line	Coaching Yard	Main Yard	
1	Supervisor	SSE	9300-34800	4600	37	29	08	11	07	11	00
		JE		4200	10	12	-02	00	06	06	00
Sub-Total					47	41	06	11	13	17	00
2	Artisan Field staff	Fitter	9300-34800 & 5200-20200	4200 To 1900	241	226	15	96	75	46	09
3	ANCILLIARY FIELD STAFF	Turner, Welder, Carpenter, Painter, Tin Smith, Black Smith, Trimmer, S.P.A, Mason etc.	9300-34800 & 5200-20200	4200 To 1900	52	35	17	23	10	02	00
4	SALOON STAFF & TRUCK DRIVER	Artician Saloon & Caretaker	9300-34800 & 5200-20200	4200 To 1800	17	11	06	08	00	02	01
5		Truck Drivr									
Sub-Total					310	272	38	127	85	50	10
6	Clerical staff	OS & Clerk	9300-34800 & 5200-20200	4200 To 1800	14	15	-01	12	00	02	01
Sub-Total					14	15	-01	12	00	02	01
7	Gr.'D' Staff	KHI/Helprr & Peon	5200-20200	1800	107	126	-19	53	39	27	07
Sub-Total					107	126	-19	53	39	27	07
TOTAL					478	454	24	203	137	96	18

2.1.1 Category-cum-Designation wise Cadre Strength of Coaching Depot (S/Line & C/Yard & Others) :

Sl. No.	Category	Designation	Scale of Pay	Grade Pay	Sanc	Act.	Vac.	Actual Deployment		
								Depot		Other
								S/Line	C/ Yard	
1	SUPER-VISOR	Sr.Section Engineer	9300 - 34800	4600	26	18	8	11	7	0
2		Junior Engineer	9300 - 34800	4200	5	6	-1	0	6	0
3		Safety Counsler	9300 - 34800	4600	0	0	0	0	0	0
SUB-TOTAL					31	24	7	11	13	0
4	ARTISAN FIELD STAFF (Gr. C)	Sr. Technician (Fitter)	9300 - 34800	4200	20	48	-28	24	22	2
5		Tech Gr.I (Fitter)	5200 - 20200	2800	79	78	01	41	35	2
6		Tech Gr.II (Fitter)	5200 - 20200	2400	65	14	51	10	03	1
7		Tech Gr.III (Fitter)	5200 - 20200	1900	28	37	-09	18	15	4
*		App. Tech. III (Fitter)	5200 - 20200	1900	00	03	-03	03	00	0
SUB-TOTAL					192	180	12	96	75	09
8		Sr. Technician Mech. (Turner)	9300 - 34800	4200	2	4	-2	4	0	0
9		Tech Gr.I Mech.(Turner)	5200 - 20200	2800	2	1	1	1	0	0

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		Tech Gr.II Mech. (Turner)	5200 - 20200	2400	1	0	1	0	0	0
11		Tech Gr.III Mech. (Turner)	5200 - 20200	1900	1	0	1	0	0	0
		SUB-TOTAL			6	5	1	5	0	0
12		Sr. Technician Mech. (Welder)	9300 - 34800	4200	1	1	0	1	0	0
13		Tech Gr.I Mech. (Welder)	5200 - 20200	2800	6	4	2	2	2	0
14		Tech Gr.II Mech. (Welder)	5200 - 20200	2400	0	0	0	0	0	0
15		Tech Gr.III Mech. (Welder)	5200 - 20200	1900	1	0	1	0	0	0
		SUB-TOTAL			8	5	3	3	2	0
16		Sr. Technician Mech. (Carpenter)	9300 - 34800	4200	3	4	-1	2	2	0
17		Tech Gr.I Mech. (Carpenter)	5200 - 20200	2800	8	6	2	4	2	0
18	ANCILLARY FIELD STAFF (GROUP - C)	Tech Gr.II Mech. (Carpenter)	5200 - 20200	2400	4	0	4	0	0	0
19		Tech Gr.III Mech. (Carpenter)	5200 - 20200	1900	1	0	1	0	0	0
		SUB-TOTAL			16	10	6	6	4	0
20		Sr. Technician Mech. (Painter)	9300 - 34800	4200	0	1	-1	1	0	0
21		Tech Gr.I Mech. (Painter)	5200 - 20200	2800	4	3	1	3	0	0
22		Tech Gr.II Mech. (Painter)	5200 - 20200	2400	1	0	1	0	0	0
23		Tech Gr.III Mech. (Painter)	5200 - 20200	1900	1	0	1	0	0	0
		SUB-TOTAL			6	4	2	4	0	0
24		Sr. Technician Mech. (Tin Smith)	9300 - 34800	4200	2	2	0	2	0	0
25		Tech Gr.I Mech. (Tin Smith)	5200 - 20200	2800	1	0	1	0	0	0
26		Tech Gr.II Mech. (Tin Smith)	5200 - 20200	2400	0	0	0	0	0	0
27		Tech Gr.III Mech. (Tin Smith)	5200 - 20200	1900	0	0	0	0	0	0
		SUB-TOTAL			3	2	1	2	0	0
28		Sr. Technician Mech. (Black Smith)	9300 - 34800	4200	0	1	-1	1	0	0
29		Tech Gr.I Mech. (Black Smith)	5200 - 20200	2800	1	1	0	1	0	0
30		Tech Gr.II Mech. (Black Smith)	5200 - 20200	2400	0	0	0	0	0	0
31		Tech Gr.III Mech. (Black Smith)	5200 - 20200	1900	0	0	0	0	0	0
		SUB-TOTAL			1	2	-1	2	0	0
32		Sr. Technician Mech. (Trimmer)	9300 - 34800	4200	2	1	1	0	1	0
33		Tech Gr.I Mech. (Trimmer)	5200 - 20200	2800	2	1	1	0	1	0
34		Tech Gr.II Mech. (Trimmer)	5200 - 20200	2400	0	0	0	0	0	0
35		Tech Gr.III Mech. (Trimmer)	5200 - 20200	1900	1	0	1	0	0	0
		SUB-TOTAL			5	2	3	0	2	0
36		Sr. Technician Mech. (S.P.A)	9300 - 34800	4200	0	0	0	0	0	0
37		Tech Gr.I Mech. (S.P.A)	5200 - 20200	2800	4	2	2	0	2	0
38		Tech Gr.II Mech. (S.P.A)	5200 - 20200	2400	0	0	0	0	0	0
39		Tech Gr.III Mech. (S.P.A)	5200 - 20200	1900	0	0	0	0	0	0
		SUB-TOTAL			4	2	2	0	2	0
40		Sr. Technician Mech. (Mason)	9300 - 34800	4200	0	0	0	0	0	0
41		Tech Gr.I Mech. (Mason)	5200 - 20200	2800	1	1	0	1	0	0
42		Tech Gr.II Mech. (Mason)	5200 - 20200	2400	0	0	0	0	0	0
43		Tech Gr.III Mech. (Mason)	5200 - 20200	1900	0	0	0	0	0	0
		SUB-TOTAL			1	1	0	1	0	0
44	SALOON STAFF & TRUCK DRIVER	MCM/ Artician Saloon	9300 - 34800	4200	1	1	0	1	0	0
45		Artician Mech. Saloon Gr I	5200 - 20200	2800	2	7	-5	6	0	1
46		Artician Mech. Saloon Gr II	5200 - 20200	2400	2	0	2	0	0	0
47		Artician Mech. Saloon Gr III	5200 - 20200	1900	2	0	2	0	0	0
48		Saloon Mech. Caretaker	5200 - 20200	1800	7	0	7	0	0	0

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50/2020/O/o. SDGM/HQ/SECR	SUB-TOTAL				14	8	6	7	0	1
49		Sr. Tech (Moter Vehicle Driver)	9300 - 34800	4200	0	1	-1	1	0	0
50		Tech Gr.I (Moter Vehicle Driver)	5200 - 20200	2800	1	0	1	0	0	0
51		Tech Gr.II (Moter Vehicle Driver)	5200 - 20200	2400	0	0	0	0	0	0
52		Tech Gr.III (Moter Vehicle Driver)	5200 - 20200	1900	0	0	0	0	0	0
SUB-TOTAL					1	1	0	1	0	0
53	CLERICAL STAFF	Ch.OS/OS-I	9300 - 34800	4600	3	3	0	3	0	0
54		OS- II	9300 - 34800	4200	7	4	3	3	0	1
55		Sr. Clerk	5200 - 20200	2800	1	2	-1	2	0	0
56		Jr. Clerk	5200 - 20200	1900	2	4	-2	4	0	0
SUB-TOTAL					13	13	0	12	0	1
57	GR-D STAFF	Khalasi Helper - II/Assistant C&W	5200 - 20200	1800	63	98	-35	52	39	7
58		Sr. Peon	5200 - 20200	1800	1	1	0	1	0	0
59		Peon	5200 - 20200	1800	1	0	1	0	0	0
SUB-TOTAL					65	99	-34	53	39	7
GRAND TOTAL					366	358	08	203	137	18

2.1.2 Category-cum-Designation wise Cadre Strength of Coaching Depot (PF/Main Yard) :

Sl. No.	Category	Designation	Scale of Pay	Grade Pay	Sanc	PF	Vac
						M/Yard	
						Actual	
1	SUPERVISOR	Sr.Section Engineer	9300 - 34800	4600	11	11	0
2		Junior Engineer	9300 - 34800	4200	5	6	-1
3		Safety Counsler	9300 - 34800	4600	0	0	0
SUB-TOTAL					16	17	-1
3	ARTISAN FIELD STAFF (Gr. C)	Sr. Technician (Fitter)	9300 - 34800	4200	18	09	9
4		Tech Gr.I (Fitter)	5200 - 20200	2800	17	15	2
5		Tech Gr.II (Fitter)	5200 - 20200	2400	4	7	-3
6		Tech Gr.III (Fitter)	5200 - 20200	1900	10	8	2
*		App. Tech. III (Fitter)	5200 - 20200	1900	0	2	-2
SUB-TOTAL					49	41	8
7	ANCILLIARY FIELD STAFF (GROUP- C)	Sr. Technician Mech. (Turner)	9300 - 34800	4200	0	0	0
8		Tech Gr.I Mech.(Turner)	5200 - 20200	2800	0	0	0
9		Tech Gr.II Mech. (Turner)	5200 - 20200	2400	1	1	0
10		Tech Gr.III Mech. (Turner)	5200 - 20200	1900	0	0	0
		SUB-TOTAL			1	1	0
11		Sr. Technician Mech. (Welder)	9300 - 34800	4200	0	0	0
12		Tech Gr.I Mech. (Welder)	5200 - 20200	2800	0	0	0
13		Tech Gr.II Mech. (Welder)	5200 - 20200	2400	0	0	0
14		Tech Gr.III Mech.(Welder)	5200 - 20200	1900	0	0	0
		SUB-TOTAL			0	0	0
15		Sr. Technician Mech. (Carpenter)	9300 - 34800	4200	0	0	0
16		Tech Gr.I Mech. (Carpenter)	5200 - 20200	2800	0	0	0
17		Tech Gr.II Mech. (Carpenter)	5200 - 20200	2400	0	0	0
18		Tech Gr.III Mech. (Carpenter)	5200 - 20200	1900	0	0	0
		SUB-TOTAL			0	0	0
19		Sr. Technician Mech. (Painter)	9300 - 34800	4200	0	0	0
20		Tech Gr.I Mech. (Painter)	5200 - 20200	2800	0	0	0
21		Tech Gr.II Mech. (Painter)	5200 - 20200	2400	0	0	0
22		Tech Gr.III Mech. (Painter)	5200 - 20200	1900	0	0	0
		SUB-TOTAL			0	0	0
23			Sr. Technician Mech. (Tin Smith)	9300 - 34800	4200	0	0

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50/2020/O/o. SDGM/HQ/SECRET		Tech Gr.I Mech. (Tin Smith)	5200 - 20200	2800	0	0	0	
25		Tech Gr.II Mech.(Tin Smith)	5200 - 20200	2400	0	0	0	
26		Tech Gr.III Mech. (Tin Smith)	5200 - 20200	1900	0	0	0	
		SUB-TOTAL			0	0	0	
27		Sr. Technician Mech. (Black Smith)	9300 - 34800	4200	0	0	0	
28		Tech Gr.I Mech.(Black Smith)	5200 - 20200	2800	1	1	0	
29		Tech Gr.II Mech. (Black Smith)	5200 - 20200	2400	0	0	0	
30		Tech Gr.III Mech. (Black Smith)	5200 - 20200	1900	0	0	0	
		SUB-TOTAL			1	1	0	
31		Sr. Technician Mech. (Trimmer)	9300 - 34800	4200	0	0	0	
32		Tech Gr.I Mech. (Trimmer)	5200 - 20200	2800	0	0	0	
33		Tech Gr.II Mech. (Trimmer)	5200 - 20200	2400	0	0	0	
34		Tech Gr.III Mech. (Trimmer)	5200 - 20200	1900	0	0	0	
		SUB-TOTAL			0	0	0	
35		Sr. Technician Mech. (S.P.A)	9300 - 34800	4200	0	0	0	
36		Tech Gr.I Mech. (S.P.A)	5200 - 20200	2800	0	0	0	
37		Tech Gr.II Mech. (S.P.A)	5200 - 20200	2400	0	0	0	
38		Tech Gr.III Mech. (S.P.A)	5200 - 20200	1900	0	0	0	
		SUB-TOTAL			0	0	0	
39			Sr. Technician Mech. (Mason)	9300 - 34800	4200	0	0	0
40			Tech Gr.I Mech. (Mason)	5200 - 20200	2800	0	0	0
41	Tech Gr.II Mech.(Mason)		5200 - 20200	2400	0	0	0	
42	Tech Gr.III Mech. (Mason)		5200 - 20200	1900	0	0	0	
SUB-TOTAL					0	0	0	
43	SALOON STAFF & TRUCK DRIVER	MCM/ Artician Saloon	9300 - 34800	4200	0	0	0	
44		Artician Mech. Saloon Gr I	5200 - 20200	2800	1	1	0	
45		Artician Mech. Saloon Gr II	5200 - 20200	2400	1	1	0	
46		Artician Mech.Saloon Gr III	5200 - 20200	1900	0	0	0	
47		Saloon Mech. Caretaker	5200 - 20200	1800	0	0	0	
	MVD	SUB-TOTAL			2	2	0	
48		Sr. Tech (Moter Vehicle Driver)	9300 - 34800	4200	0	0	0	
49		Tech Gr.I (Moter Vehicle Driver)	5200 - 20200	2800	0	0	0	
50		Tech Gr.II (Moter Vehicle Driver)	5200 - 20200	2400	0	0	0	
51		Tech Gr.III (Moter Vehicle Driver)	5200 - 20200	1900	0	0	0	
		SUB-TOTAL			0	0	0	
52	CLERICAL STAFF	Ch.OS/OS-I	9300 - 34800	4600	1	1	0	
53		OS- II	9300 - 34800	4200	0	0	0	
55		Sr. Clerk	5200 - 20200	2800	0	0	0	
56		Jr. Clerk	5200 - 20200	1900	0	1	-1	
SUB-TOTAL					1	2	-1	
57	GR-D STAFF	Khalasi/Khalasi Helper I, II	5200 - 20200	1800	42	32	10	
59		Sr. Peon	5200 - 20200	1800	0	0	0	
60		Peon	5200 - 20200	1800	0	0	0	
SUB-TOTAL					42	32	10	
GRAND TOTAL					112	96	16	

87950/2020/Existing Depot/Report of Staff section-wise at Coaching Depot/BSP:

S#	Name of Section	Name of activity	Shift wise No. of staff deployed	
			Shift	No. of staff (Supervisor, Technician (Artisan/Ancillary), Helper)
1	Washing/Pit line Primary maintenance of Coaching trains	Under gear examination all hanging parts	All Shift	59 (Supervisor – 04, MCM-14, Gr. - I- 13, Gr. – 2, Gr.- 7, Helper-19)
2		Upper gear examination all passenger amenities items	All shift	45 (Supervisor - 05, MCM-8, Gr. – I - 16, Gr. – II – 01. Gr.-III – 01, Helper -14)
3	Secondary maintenance of Coaching trains	Under gear examination all hanging parts	All shift	same staffs utilizing
4		Upper gear examination all passenger amenities items	All shift	same staffs utilizing
5	IOH shed (Sick line attention)	all under gear parts Examination	Day shift	49 (Supervisor- 02, MCM-14, Gr. – I – 10, Gr. – II – 02, Gr. – III – 07 Help-14)
6		all upper gear parts examination	Day Shift	21 (Supervisor – 01 MCM-03, Gr. – I – 10, Gr. – II – 02, Gr. – III – 03 & Help -02)
7	Schedule maintenance (Yard)	Dash pot oil, stanching, Buffer greasing.	08:30 hrs to 16:00 hrs and 22:00 hrs to 06:00 hrs.	07 (MCM-2, Gr. – I – 03, Gr. – III – 01 & Help.-01)
8	Miscellaneous associated activities and Pipe Fitting and Curtain Changing Gang and Trimming work.	IOH diary maintenance, POH Defect, Staff distribution, and other records upkeepment	Day shift	27 (MCM – 04, Gr. I – 10, Gr.– II – 01, Gr. – III – 06 Assistant C&W – 06)
9	Night Store (Yard)		All Shift	04 (Gr. – I - 01, Gr. – III – 02 and Assistant C&W – 01)
10	LHB batch	Under gear examination all hanging parts	Day shift	14 (Supervisor- 01, Sr. Tech- 01, Tech-07 & Helper -05)
11		Upper gear examination all passenger amenities items	Day shift	07 (Supervisor – 02, Tech-02 & Helper – 03)
12		Sick line	Day shift	13 (Supervisor-01,Sr. Tech-1, Tech-02 & Helper – 09)
13	Platform /Main Yard activities	Under gear examination ICF-: MU washer, Axle spring broken, Wire rope pin/nut bolt missing, Brake binding, Brake	All shift	96 Staff are utilised to attend the routine activities mentioned as under: ➤ Rolling in examination of all coaching

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		Id, change FP/BP hose pipe change, Axle box cover provided, Safety bracket pin/nut, Bulb cotter, Shock absorber, Brake rigging pin change, Rope cotter, Equalizing stay rod replaced		<p>trains to find out any hanging parts.</p> <ul style="list-style-type: none"> ➤ Quick examination of all coaches to detect any broken parts springs etc. ➤ To detect any unusual sound during rolling in and rolling out examination and reporting of the same to base depot. ➤ In coming examination of all terminating trains, releasing of brakes, closing of all doors and windows of incoming train. ➤ Testing of locomotive before attaching locomotive in originating trains and ensuring air pressure continuity and issuing BPC to originating trains. ➤ To attend all public complaints related to mechanical deptt. ➤ Attaching/detaching of all PCV/OCV and its certification in BPC <p>-----</p> <p>The Main Activities of PF:</p> <p>a) Starting trains Air-continuity test, spraying of deodorant, issue of BPC and rolling out examination.</p> <p>b) Enroute Trains – Rolling in examination, axle box feeling, release of brakes, safety checks, interior check for amenities, carpentry, water service, repair attention etc.</p> <p>c) Terminating trains : Rolling in examination, axle box feeling, releasing of brakes, safety check, interior check for amenities, carpentry, water service, repair attention, dry sweeping, lavatory cleaning and closing of doors and shutters.</p> <p>d) Loco change / Turn Round : Rolling in and Rolling out examination, axle box feeling, releasing of brakes, safety check, air continuity check and handing over of BPC.</p>
14		Upper gear examination ICF :- OTL provided, Watering & CTS work, AC window glass change, Window shutter repair, AC inside door & door closer repair, Repair/replaced of lavatory door, tap, flush cock, washbasin drain, seat. Berth alignment.		
15		Under gear examination LHB:- Axle spring broken, axle box cover, FP/BP air hose/angle cock change, detection of primary spring/secondary spring broken accompany the same to next division, Yaw damper change.		
16		All shift:- CTS work in two shift from 06:00 hrs to 14:00 hrs & 14:00 hrs to 22:00 hrs.		
17	Linen (Laundry management)	Handling in taking over of linen in coaches, counting of linen at station and at depot.	All shift	20 (SSE – 02, Sr. Clerk – 01, Gr. – I – 04, Gr. – II – 02, Gr. – III – 03 Assistant C&W-08)
18	M&P (Machinery & Plant) mill wright work	Repairing of M&P items	Day shift	06 (SSE-02, MCM-01, Tech-03)

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19	OBHS (On board housekeeping service) & COIS work and Bio Tank & Past Control	On line Redressal of passenger complaints, data entry, Rake creation, updating of sick coaches, entry of POH, OFF POH coaches, updating of coach history	06:00 hrs to 22:00 hrs	10 (SSE-03, MCM-02, Gr. – I – 02, Gr. – III, 01, Assistant C&W-02,
20	Inspection carriage (RA) saloon maintenance	Under gear examination all hanging parts	Day shift and any time of booking	18 (MCM- 02, S/AI- 13, Assist. C&W – 03)
21		Upper gear examination all passenger amenities items		
22	Store section (Depot store)		Day shift	19 (SSE-01, Ch OS-01, OS-02, Sr. Clerk – 01, Jr. Clerk-03, MCM-03, Gr. – I -05, Gr. – III – 01 Assistant C&W- 02)
23	Rolling stock)	DCPT refilling, Requisition, Imprest, RA Maintenance record, Truck billing, Pantry car billing, T&P and M&P items, Challan, DS-8, Furniture records		04 (OS-02, Tech-02)
24	Establishment section & Pass Section (including Contractual work) and Dak runner	Muster roll, OT, TA, CEA & all establishment replaced activities. Pass & PTO, Contractual bill. Avg. no. of OT-Bills & TA Bills per month-07 & 105 No. of CEA Bills per Year-270 Appx. No. of Registers & Files being dealt-74 & 53	Day shift	08 (Ch. OS – 02, MCM-02, Assistant C&W – 03, Peon – 01)
25	Machine Shop and Smithy room			09 (MCM – 07, Gr. – I – 01 and Assistant C&W – 01)
26	Deployment of staff at other offices /units			18 (O.S. – 01, MCM-2, Tech-7, S/A-I- 1, Asst. C&W-7

***Total no. of Staff deployed in various Sections =**

59+45+49+21+07+27+04+14+07+13+96+20+6+10+18+19+04+08+9+18 = 454

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S#	Name of staff	Designation	Activities dealt	Period (in years)
1	Sri Charan Singh Chouhan	MCM	SSE/C&W/SECR/HQ/Cntrl	15
2	Sri Prasant Banerjee	MCM	SSE/C&W/SECR/HQ/Cntrl	15
3	Sri Ashis Kumar Sao	OS	Train Lighting Office	05
4	Sri Umendra Patle	Tech-I	Sr. DME Office	03
5	Sri Raj Kishore Kumar	Tech-I	Chief Power Controller	07
6	Sri Kamlesh Kumar Dubey	Tech-II	Chief Power Controller	06
7	Smt P. Vasundhara	Tech-III	Chief Power Controller	06
8	Smt Sushma Sadhu	Asst. C&W	Chief Power Controller	07
9	Sri Ranjan Kumar Tarnia	S/A-I	MechDepartment/HQ	15
10	Sri Santosh Kumar	Asst. C&W	MechDepartment/HQ	05
11	Sri Jitendra Kumar	Asst. C&W	GM Office	10
12	Sri Surendra Singh	Asst. C&W	GM Office	05
13	Sri Madhusudan Behra	Asst. C&W	GM Office	01
14	Sri Simma Someswar Rao	Asst. C&W	GM Office	01
15	Smt Deepika Soni	Asst. C&W	Sr. DME Office	01
16	Sri Sibashis Roy Choudhary	Tech-III	SSE/ Control/BSP	01
17	Sri Krishna Pal	Tech-III	SSE/ Control/BSP	01
18	Sri T. Sanmukh Rao	Tech-III	BCN/Depot/BSP	02

2.3 **Activities of Coaching Depot, BSP:**

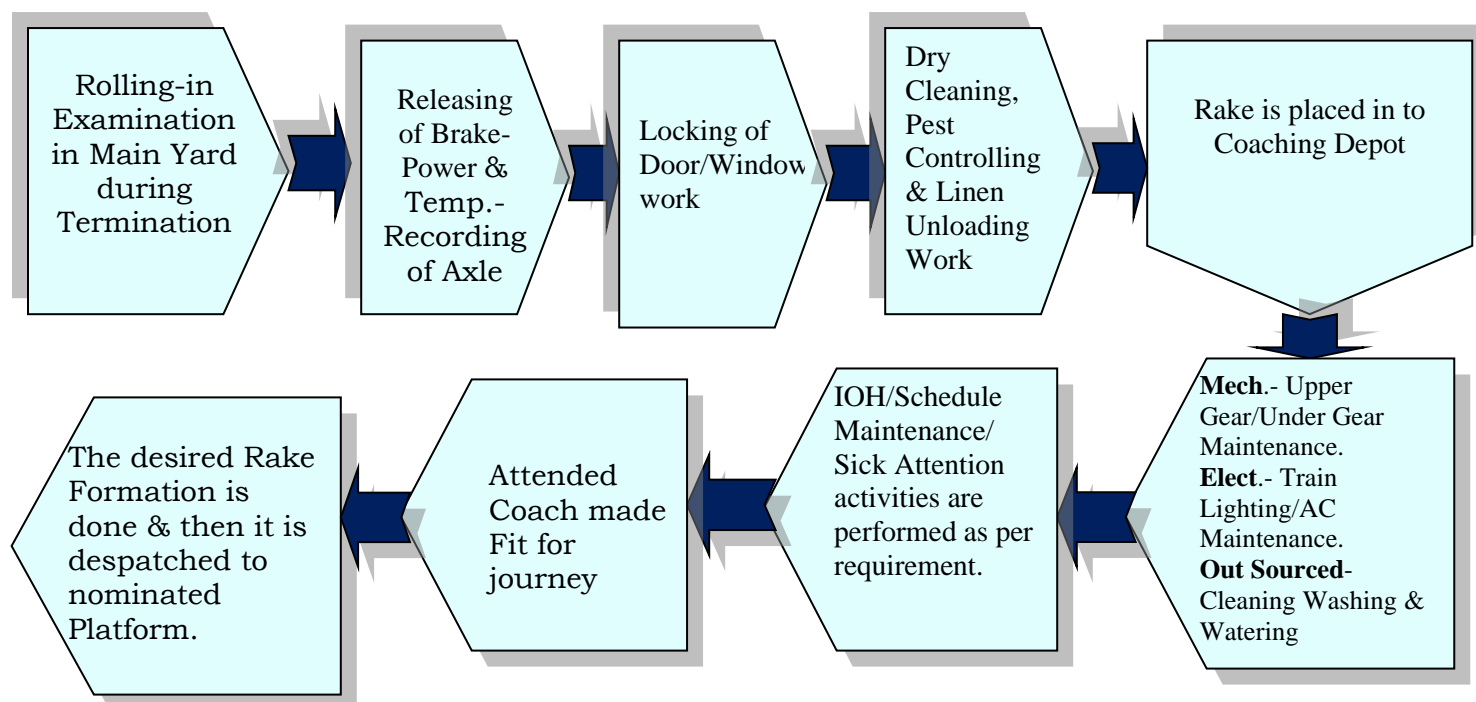
The main activities being carried out at Coaching Depot are given below:

To maintain coaching stock in good condition, The activities pertaining to a Coaching Depot may broadly be classified as under:

- (i) Trip schedule of rakes daily i.e. under gear examination of coaches in pit line, side examination & air-brake testing, other repair which noticed during examination, dry-sweeping, garbage disposal, Internal/External/Lav./Washbasin cleaning of trains etc.
- (ii) 'A' schedule after every one month of each coach.
- (iii) B' schedule after every three month of each coach.
- (iv) IOH repair after every nine month (+01month) of each coach.
- (v) General / other repairs of coaches whenever necessary.
- (vi) Examination and issuing BPC
- (vii) Examination & maintenance of RA, RE and RHV
- (viii) Cleaning of Pit line, surface and surroundings of the complex.
- (ix) Loading/Unloading, storage and handling of materials and make them available at site.
- (x) Accompanying ARME whenever as and when required.
- (xi) Inspection, making reports and sending of off-POH and due-POH coaches to shops.
- (xii) Recording and maintenance of each and every schedule, repairs attended and history cards of each coach.

2.4 Flow Process Chart of Coaching Depot's work:

The general activities being carried out by Coaching Depot Organization for compliance Primary/Secondary Maintenance work and other related routine tasks may be represented by following "Flow Chart" :



2.5 Working Hours :

S#	Work Place/Section/Unit	Working Time
1	Office & Stores	08:00 hours to 12:00 and 14:00 to 17.00 hours
2	Sick Line	08:00 hours to 12:00 and 14:00 to 17.00 hours
3	IOH Shed	08:00 hours to 12:00 and 14:00 to 17.00 hours
4	Primary/Secondary Maintenance & Yard/Platform activities;	These activities carried out in 3-Shifts i.e. 00:00-08:00 hours, 08:00-16:00 hours, 16:00-00:00 hours
*Note-- Weekly Rest is given to concerned staff as per Duty-Roster.		

2.6 Maintenance Schedule:

S#	Schedule	Frequency	Time required	Items attended
Main Maintenance Schedule :				
1	Trip schedule	Every trip	Round the clock	All items are attended
2	A	30 days \pm 05 days	08:00 hrs to 16:00 hrs & 22:00 hrs to 06:00 hrs.	All items of trip schedule Dash pot oil, stanching, DA valve etc.
3	B	60 days \pm 05 days		All items of trip schedule Dash pot oil, stanching, DA valve, Interior paint touch up, Intensive cleaning, Tightened/replaced, piston stroke, clean CDC filter etc.
4	IOH	Nine month \pm 15 to 30 days	One working day	Under gear and upper gear all items attending
Subsidiary Maintenance Schedule :				
5	D1	Every trip	6 hours	All items are attended
6	D2	Monthly	01 hours/coach	
7	D3	Six monthly	02 hours/coach	
8	SS1	1.5 Years	01 working day if overhauled trolley received from work shop.	

2.7 Category wise details of Maintenance activities being carried out at Coaching Depot, BSP:

The maintenance activities carried out at Coaching Depot may be broadly classified in three category:

I. Washing Line Activities**II. Sick Line Activities**

} These two activities are performed in Coaching Depot Yard

III. Main (Station) Yard Activities**2.8 Section wise activities being carried out at Coaching Depot/BSP:-****2.8.1 Works carried out in WASHING LINE :**

- Inspection
- Cleaning & washing
- Brake testing
- Primary Maintenance
- Secondary Maintenance
- Watering
- Loading of linen
- Maintenance of AC & electrical circuits of coaches

2.8.2 Works carried out in SICK LINE :

- Wheel and Axle Assembly
- Bogie Maintenance
- Buffer Maintenance
- Air Brake System Maintenance
- Trolley Maintenance
- Lifting of Coaches

2.8.3 Works carried out in MAIN (STATION) YARD :

- Rolling –In & Rolling –Out Examination
- Measuring Temperature of Axle Box .
- SLR-Luggage-door checking
- Air pressure continuity for engine changing & reversing
- Issue of BPC of originating trains.
- Release of coaching rakes after detachment/attachment/originating/terminating.
- Attending Brake binding of coaches.
- Other end examination.
- Monitoring of 'Coach Watering' which is given on Outsourcing.
- Monitoring of Train Cleaning activities.
- Attending emergency repairs in through passing trains.

2.8.4 PRIMARY MAINTENANCE :

Primary maintenance schedules are required to be carried out by the base depots to which coaches are allotted. In emergency, when due to any reason coaches cannot reach their base depots and primary maintenance schedules become due, A & B schedules should be undertaken by the carriage depots where the coaches are available. All schedules should be carried out by primary maintenance depot. Primary Maintenance activities consists of two parts namely Under gear maintenance & Upper Gear maintenance

A. Under gear:

- Examination & Testing
- Arrange to place at IOH pit for IOH (Intermediate Overhauling) of due coaches in the rake
- Schedule Attention (A & B) of due coaches in the rake
- Sick Coach Attention

B. Upper gear:

- Passenger Amenities
- Cleaning & Watering of Coaches
- Padlocking
- Outside & Inside cleaning

Items being attended during Primary Maintenance:

For primary maintenance at Coaching Depot/BSP, the base rakes undergo scheduled of examination like Trip schedule, A schedule, B schedule, IOH schedule. Almost all the defective items are changed during the scheduled examinations. Various items attended during primary maintenance are as follows:-

- Under gear checking:-Wheels, Buffers, Headstock, Trough floor, Draw bar, Screw coupling, Trolley frame, Links, Shock absorber, Centre pivot, Equalizing stays, Bolster suspension arrangements, under frame, Safety brackets etc..
- Brake gear checking (both vacuum and air):- Bushes, Pins, Cotters related to Brake gears, Pull rods, SAB(Slack Adjusting Barrel), Brake beams, Brake power adjustment, Floating livers, Brake trusses, Brake heads and Brake shoes etc.
- Testing of Brake power and alarm signal:-In-operative vacuum/ air brake cylinder, in-operative alarm signal, brake power test (vacuum-IRCA & BVT, air-rake rig test), train pipes, brake pipes, feed pipes, overhauling of vacuum/air brake cylinders(6 months

87950/2020/O/o. SDGM/HQ/SECR (3 months interval) etc.

- Dash pot oiling: - Checking of oil height, filling oil, writing of oil filling date.
- Oiling: - Screw coupling, buffer plungers, crank shaft, changing of direct admission valves, bolster hanger etc.
- Documentation: - Recording the particulars of each coach.

2.8.5 **SECONDARY MAINTENANCE**

A. Under gear:

- Examination & Testing

B. Upper gear:

- Watering of Coaches
- Washing & cleaning of coaches
- Linen and pantry car provisions

2.8.6 Schedule Maintenance: In addition to above, various type of Schedule of maintenance needs to be done for safe and smooth operation Coaching Rakes. Details of schedule maintenance activities are as under:

I. TRIP SCHEDULE :-

Trip schedule is attended per trip of the rake. The trip is being attended by Primary depots. No need to detach the coach from the rake during trip schedule. Total distance travelled by passenger rake in a trip up and down is more than 3500 km. Following procedure is adopted during the trip schedule:-

- All under gear parts are thoroughly examined.
- All moving parts are lubricated.
- Complete examination of draw & buffing gear for its proper functioning. Lubrication is essential.
- Coupling should be free in its screw i.e. ensure easy movement of coupling.
- Proper examination of primary suspension arrangement.
- Ensure the leakage of dash pot and oil level of dash pot.
- Proper securing of safety strap and safety loop.
- Proper examination of secondary suspension. Ensure the working of spring, shock absorber, safety strap & safety loop.
- Proper examination of wear in suspension link bracket, pin & shackle stone.
- Examine the proper function of shock absorber & securing bolt.
- Examination of equalizing stay rod for its proper securing.
- Examination of proper securing of bolts & cotters & silent bushes of centre pivot.
- Ensure the proper function of side bearer or its oil level.
- Changing of worn brake blocks & pin & adjustment of brake power.
- Proper cleaning of coach from inside & outside & disinfections.
- Spraying of pesticides elements.
- Checking of all joints & pipe joints & other fittings & filling of water tank.
- Proper opening & closing of vestibule doors.
- Checking of amenity & safety items.
- All falls plate examination of vestibule.
- Testing of alarm signal, guard van valve & its gauge.
- Preparation of DRS card & brake power certificate.

II. SCHEDULE 'A':

Schedule 'A' is required to be given **every month +/- 7 days** at the nominated primary maintenance depot within the normal primary maintenance time on a washing/pit line. A coach need not to be detached from the rake for Schedule 'A' examination unless it requires such repairs which cannot be attended to on the washing line or within the prescribed

primary maintenance time on the washing line.

The following items of work are attended during **Schedule `A'** examination, i.e., monthly examination:-

- All items of primary/secondary maintenance schedule.
- Intensive cleaning of coaches.
- Intensive cleaning of lavatory pans and commode with specified cleaning agent.
- Thorough flushing of tanks.
- Checking of water pipes, flush pipe, flushing cocks, push cocks, etc., for ease of operation and free flow of water.
- Thorough dis-infection of all compartments.
- Thorough inspection and repairs of draw gear.
- Thorough inspection and repairs of buffers.
- Oil in hydraulic dash pots should be checked to detect oil leakage from them through defective seals or through vent screws. Add/replenish with specified grade of oil if oil level is below 40 mm in tare condition to ensure better riding comfort. Similarly oil in side bearer baths should be checked when the oil is below the plug and replenished with specified grade of oil so that wear plate is fully covered by oil.
- Inspection and repairs of commode chute.
- Thorough check and repairs of sliding doors and vestibule doors for easy and smooth operation and correct alignment and all wearing parts, loose screws, etc.

III. SCHEDULE `B' :

Schedule `B' is required to be given every **three months +/- 15 days** at the nominated primary maintenance depot within the normal time allowed for primary maintenance on a washing line in rake. Coach need not be detached from the rake for purpose of this examination unless it requires such repairs which cannot be attended to on the washing line or within the prescribed maintenance time on the washing line.

The following items of work should be attended.

Air brake system

(i). Same as 'A' schedule

Other assembly maintenance

- Besides brake system other items should be attended as given below:
- All items of Schedule `A'
- Painting of lavatories from inside.
- Thorough inspection and repairs of brake gear components.
- Thorough checking of trough floor, turn under, etc., from underneath for corrosion.
- Touching up of painted portion, if faded or soiled.
- Overhauling & testing of alarm chain apparatus.
- Testing of guard van valve.
- Greasing of equalizing stay rod.

IV. IOH (Intermediate overhauling):

At depot, the coach that is detached for IOH is taken over to the washing line for cleaning, lubrication and minor maintenance. The coach that are detached due to a major defect in the distributor valve, brake cylinder, Auxiliary reservoir etc, is taken to the pit line for the replacement of such sub-assemblies, on unit exchange basis. The detachment of coach is carried out so as to make the maintenance or testing

Intermediate overhauling is performed once in 9 month. The coach is disassembled from the bogie and is lifted up with the help of hydraulic machines. The bogie is moved to the bogie and wheel assembly section. In the IOH lane, maintenance work on the coach is done.

Maintenance work includes minor painting works, detection of leakage in pipe fitted below the coach, welding works etc. Brake testing is also done along with the maintenance works. Following are the main activities carried out during IOH work-

- Thorough repair of running gear including bogies where necessary.
- Under frame members and body including floor should be thoroughly examined.
- Bogie frame should be checked to direct damages, cracks and deformation and necessary repair is to be carried out.
- Worn out bushes and pins to be replaced.
- Condemned brake block and brake head to be replaced.
- All safety brackets and loops should be intact and properly secured.
- Vacuum cylinder, release valve and alarm chain should be over hauled and tested.
- Checking and replacing of oil of side bearer in IFC coaches.
- Topping up of grease on axel box and ultrasonic testing of axle and swing link bolt of BEML coaches.
- Distance between wheel flange on same axle and tyre profile should be checked.
- Complete inspection to repair of draw bar and buffing gear.
- Touching up of damaged paint of coaches outside and inside.

2.8.7 Other Associated Activities:

Besides above other supporting activities like welding, carpentry, trimming, plumbing, pump operation, statistical work, coach & premises cleaning, locking & unlocking of coaches and proceed with ART whenever required are being carried out at the coaching complex.

2.8.8 Mill Wright (M&P) Activity:

It is basically a supporting activity regarding maintenance work Coaches as Tools, Plant and Machinery items are maintained under this (M&P) activity.

2.8.9 Offices' Work:

All types of documentation related to Establishment matters like maintaining of Muster Roll/Rly. Qtr. Matters, dealing of PASS/PTO, RTI cases, D&A cases and carrying out Records keeping work.

2.8.10 Store Section:

This section deals with receipts and issues of materials required for maintenance of coaches. The stores section deals with imprest store items, stocked items and local purchase items. Besides these activities, this section also deals with Preparation of I/C & O/G challan, DS-8 of store materials and cash imprest bill, Material chasing & collection from GSD or other depot, Counting of all stock & Non-stock items, Correspondence of store related letters and maintaining various Registers & Record keeping.

2.8.11 Linen Section:

This section deals with issuing/collecting the linen, curtains, clothing and woolen, monitoring of Mechanized cleaning of linen items and documentation of Outsourced work.

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Details of outsourced activities being carried out in Coaching depot, Bilaspur:

S#	Name of activities	Section/shop	Existing
1	ART & RTTV conversion	Depot	Outsourcing
2	Wheel coach conversion	Depot	Outsourcing
3	Mechanized coach cleaning	Depot	Outsourcing
4	OBHS	Depot	Outsourcing
5	Pest & rodent control	Depot	Outsourcing
6	Bio Toilet Maintenance	Depot	Outsourcing
7	DCPT maintenance	Depot	Outsourcing
8	Pantry Car (LPG gas pipe line)	Depot	Outsourcing
9	Laundry (Boot laundry and mechanized laundry)	Depot	Outsourcing
10	Hiring of Truck	Section	Outsourcing
11	Carpentry work	Depot	Outsourcing

2.10 Section wise Workload details:-

For speedy and smooth accomplishment of various type of maintenance work ,each Section of Coaching Depot / BSP has been assigned to perform the respective nature of routine work and the target work compliance by integrated approach of all the existing Sections of Coaching Depot.

The work load of each Section carried out (April2019 to March2020): is mentioned as under:

2.10.1 (A) Primary maintenance of trains including superfast, mail express and passenger trains (Month wise position/list of No. of coaches dealt with primary maintenance): **24 primary trains are maintained at coaching depot, Bilaspur; Total no. of 1793 coaches; Average 256 coaches are being maintained per day.**

Sr. No.	Train No.	Rakes	Super Fast/ Express/ Passenger	Round Trip KM	Train Name
1	12851/12852 (LHB)	01	Super Fast	2826	BSP-MAS-BSP (Chennai Super Fast)
2	12849/12850 (LHB)		Super Fast	2602	BSP-PUNE (Pune Super Fast)
3	22815/22816 (LHB)	01	Super Fast	4312	BSP-ERS (Super Fast)
4	22843/22844 (LHB)		Super Fast	1936	BSP-PNBE (Special)
5	58212/18239/12856/12855/18240	02+01 scratch rake	Super Fast /Express	1850	BSP-GAD-NGP-BSP-NGP-BSP (Shivnath/Intercity Express)
6	58210/58209/ 18237/18238	05	Passenger/E xpress	4214	BSP-GAD-ASR-BSP (Chhattishgarh Express)
7	18234/18233	03	Express	2020	BSP-IND-BSP (Narmada Express)
8	58219/58220/58221/58222/58223/58224	02	Passenger	1704	BSP-CHRM (Chirmiri Passenger)
9	18236/18235	03	Passenger	1423	BSP – BPL-BSP (Bhopal Passenger)
10	58214/58215/58217/58218/58216/58213	02	Passenger	1276	BSP-JSG-TIG-R-TIG-JSG-BSP (KBJ Passenger)
11	58201/58207/58208/58204/58203/58205/58206/58202	04	Passenger	1678	BSP-R-KSNG-NGP-BSP (Local)
12	18247/18248	02	Passenger	932	BSP – REWA
13	18243/18244 (LHB)	03	Super Fast	3636	BSP – BGKT
14	18245/18246 (LHB)		Super Fast	3768	BSP – BKN
15	18801/18802 (LHB)	01	Express	203	Raipur - Korba
16	18803/18804	01	Express	203	Raipur - Korba

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Secondary maintenance of trains (month wise position of No. of coaches dealt with secondary maintenance): **03 secondary trains maintained at coaching depot, Bilaspur total no. of 108 coaches average 15 coaches maintained per day.**

Secondary Maintenance Trains :						
Train no.	Category	From	To	Round trip	Rakes	Frequency
22647/48	S/Fast	BSP	TVC	5098	2	WED,SAT
22619/20	S/Fast (LHB)	BSP	TEN	4986	1	TUE
12441/42	S/Fast (LHB)	BSP	NDLS	3002	2	MON,THU

2.10.3 Sick line/IOH activities (Avg. no. of coaches dealt per day with sick repair & IOH):

Average 8.8 no. of coaches are dealt per day with sick repair & IOH

2.10.4 Platform/Yard activities/Enroute examination (Rolling in rolling out) (shift wise avg. no. of coaching trains passes per day at Bilaspur station).

Through, terminating /originating examination of coaching trains:

Avg. no. of coaches of S.F. trains being dealt per day : **Average 20 trains per day/average 450 coaches per day.**

Avg. no. of coaches of M.E. trains being dealt per day: **Average 44 trains per day/average 640 coaches per day.**

Avg. no. of coaches of passenger trains being dealt per day: **Average 16 trains per day/average 270 coaches per day. And Average 10 MEMU trains per day/average 80 MEMU coaches per day.**

2.10.5 Schedule maintenance: During Schedule maintenance, following tasks are accomplished:-

A- Schedule

1. All items of trip schedule, (2) Intensive cleaning of compartment including ceiling. (3) Cleaning of lavatory pan & commode, (4) Cleaning of chimneys of pantry cars (5) Cleaning & check water pipe lines (6) Flush & Clean water tanks thoroughly (7) Paint commode chutes inside & outside (8) Disinfection on the coach (9) Test. Vac/Brake cylinder & train pipe joints under Vac./Air Pressure (10) Check Alarm apparatus/clappet valve & PEASD under Vac. Air pressure (11) Clean DA valve/DC filter (12) Drain Air reservoir (13) Examine all brake gear components including brake blocks & brake heads. (14) Examine Draw gear (15) Examine Buffers & buffing Gear (16) Check and replenish oil in dash pots (17) Check luggage doors for ease of operation.

B-Schedule

(1) Intensive cleaning- panels, floor, head stains, seats & berths, basins, Squatting pan, commodes, Mirrors, window sills (2) Coach disinfection (3) Over head tank flushing (4) Release valve overhauling (5) Attended all plumbing work (6) Attended all carpentry work (7) Overhaul of alarm apparatus & testing (8) Neck ring replaced (9) Tightened/Replaced- Brake shoe bolts, Buffer bolts, Anchor link studs, VSA bolts & others (10) Piston stroke (11) Check DA valve and change filter (12) Oil dash pot (13) Clean and paint Equalizing stay (14) Lubricate side bearer and all moving parts (15) Clean CDC filter (16) Record brake cylinder release time (17) Record brake cylinder pressure

2.10.6 Inspection carriage/RA maintenance (No. of RA maintenance):

Total **11 RA (inspection coaches)** are maintained at coaching depot Bilaspur (by deployment of one supervisor and 13 staffs)

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Sl	Name of staff	Designation	Activities dealt
1	Sri S. Puspanadham	MCM	Upper gear maintenance of inspection carriages including toilet cleaning, upkeepment of all items provided in carriages in kitchen area.
2	Sri A. Uma Maheshwar Rao	S/A-I	
3	Sri B. Prakash Rao	S/A-I	
4	Sri Deepak Kumar	S/A-I	
5	Sri Satyawar Pradhan	S/A-I	
6	Sri B. Rammohan Rao	S/A-I	
7	Sri Sunil Kumar	S/A-I	
8	Sri Gilbert Elias	MCM (Turner)	
9	Sri Om Prakash/Laxman	Tech-I	
10	Sri Gore Lal	Tech-I	
11	Sri Bhakt Prahalad	Tech-I	
12	Sri Satruhan Prasad Vaishnav	Tech-I	
13	Sri P. Annant Rao	Carpt-I	
14	Sri G. Raju	Asst. C&W	
15	Sri Harihar Hianl	Asst. C&W	
16	Smt Anita Bai	Tech-I	
17	Smt Heera Bai	Tech-I	
18	Sri Mohan Mahto	Asst. C&W	

2.10.7 Linen Management :

Average 27 nos. AC coaches are being maintained per day under the Linen Management work

Sl	Name of staff	Designation	Activities dealt
1	Sri R.J.O.Connor	SSE	1. Handling in taking over of linen in coaches, counting of linen at station and at depot 2. Maintenance of Mechanized laundry. 3. Stitching of blanket frills 4. Condemnation of linen 5. RCD handling & records keeping. 6. Monitoring of cleaning & working of linen contract.
2	Sri P.K.Dewangan	SSE	
3	Sri Manoj Kumar	Jr. Clerk	
4	Smt Vandana	Tech	
5	Sri Om prakash	Tech	
6	Sri Ajit Pal Singh Ahluwalia	Tech	
7	Sri G.Y.K.Naidu	Tech	
8	Smt Padma	Tech	
9	Smt Saira	Tech	
10	Smt Laxmi Mallik	Teck	
11	Ku. Laxmi Rajput	Assi. C&W	
12	Sri B.R. Ratre	Tech	
13	Sri Manoj Nayak	Tech	
14	Sri Rajesh Khujur	Tech	
15	Sri Madhu M.K.	Tech	
16	Sri Brij Lal	Assi. C&W	
17	Sri G. Dharmendra Rao	Assi. C&W	
18	Sri Devendra Kumar	Assi. C&W	
19	Sri Jitendra Kr. Mangeshkar	Tech	
20	Sri Vikash Kumar	Assi. C&W	
21	Sri Vijendra Kumar Thakur	Assi. C&W	

2.10.8 Establishment section:

Under this Section, Muster rolls, OT, TA, CEA & all establishment related activities, Pass & PTO, Contractual bills are being dealt

Avg. no. of OT-Bills & TA Bills per month-07 & 105

No. of CEA Bills per Year-270

Appx. No. of Registers & Files being dealt-74 & 53

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Sl	Name of staff	Designation	Activities dealt
1	Sri Nilamber Singh Raj	Sr. Clerk	Muster roll, OT, TA, Children Education
2	Smt. S. Vijaya	MCM	Muster roll, files & other miscellaneous
3	Smt Poonam Kerketta	Asst.	
4	Sri M.K.Sahu	Ch. OS	Preparation of Pass, PTOs, Duty Pass of all staff of Coaching Depot.
5	Smt Vibha Mondal	Assistant C&W	
6	Sri Robin Biswas	Ch. OS	Contractual bill preparation and record maintenance.

2.10.9 Store Section:

Sl	Name of staff	Designation	Activities dealt
1	Smt Shraddha Ramteke	SSE/Store/BSP	In charge of store, looking after activities of both ICF, LHB and online store activities.
2	Sri U.K.Mandal	Ch. OS/Store	Maintaining ledger of the allotted stock and non stock (ICF) and looking after scrap disposal.
3	Sri T. Venkatesh	OS	Maintaining ledger of the allotted stock and non stock items (ICF).
4	Sri K.R. Narety	OS	Maintaining ledger of the allotted stock and non stock items (ICF) and also movement of wheels and trolleys (ICF) to and from workshop.
5	Sri M.V. Maheshwar Rao	Sr. Clerk	Maintaining ledger of the allotted stock and non stock items (ICF) and also movement of wheels and trolleys (ICF) to and from workshop.
6	Sri Sunil Lakara	Jr. Clerk	Maintaining ledger of the allotted stock and non stock items (ICF).
7	Sri Md. Kayyum Khan	MCM	Working under SSE/Pest and rodent control/BSP.
8	Smt B.S.Parvati	Tech-I	Dealing with all the activities related to online requisitions, demands and maintaining all issue notes, challans and verified copies (ICF).
9	Smt Rukmani Bai	Tech-I	Providing store materials demanded on LM or challan to sick line, yard, IOH and different departments.
10	Smt Urmila	Tech-I	Providing store materials demanded on LM or challan to sick line, yard, IOH and different departments.
11	Smt Sukhiya Bai	Tech-I	Stocking of store materials receiving from DSD/BSP and from different place after proper accountable at the nominated place.
12	Sri Kamal Kumar	Tech-I	No activities as on long sick.
13	Smt A. Usha	Asst. C&W	Maintaining DMTR and adjustment memo of store materials.
14	Smt Aruna Bai	Asst. C&W	Stacking of store materials receiving from DSD/BSP and from different places after proper accountable at the nominated place.
15	Smt Kala Bai	Asst. C&W	Providing store materials demanded on LM or challan to sick line, yard, IOH and to different departments.
16	Sri N.K. Sahu	MCM	Maintaining ledger of stock and non stock items of store materials (LHB) and also stacking of the materials at the nominated place after proper accountable.
17	Sri Liladhar	MCM	Providing store materials demanded on LM or challan to sick line, yard, IOH and to different departments.

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18	Sri Deepak Kumar	Jr. Clerk	Maintaining ledger of the allotted stock and non stock items (LHB) and also movement of wheels and trolleys (LHB) to and from workshops.
19	Sri Prafull Kumar	Jr. Clerk	Maintaining ledger of stock and non stock items of store materials (LHB) and also stacking of the materials at the nominated place after proper accountable.

2.10.10 Millwright (M&P) section:

Sl	Name of staff	Designation	Activities dealt
1	Sri Ajay Kumar	SSE	Up keep of all machinery, M&P item, break down repair of Jacks, Cranes,
1	Sri K.P. Verma	JE/M&P/BSP	
2	Sri Ayyub Khan	MCM	
3	Sri P. Simhachalam	Tech-I	
4	Sri Md. Faiyaz Ahemad	Tech-II	

2.10.11 OBHS (on board housekeeping service) & COIS work: On line Redressal of passenger complaints, data entry, Rake creation, updating of sick coaches, entry of POH, OFF POH coaches, updating of coach history .

2.11 Month wise Position of IOH+ Sick Repair:

Details of IOH & Sick Repair of last two years (2018-2020) are as under:

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2.11.1 DETAILS OF MECHANICAL SICK COACHES (APR 2018 TO MAR 2019):

REASONS	APR 18	MAY 18	JUN 18	JUL 18	AUG 18	SEP 18	OCT 18	NOV 18	DEC 18	JAN 19	FEB 19	MAR 19
WHEEL DEFECT	7	6	0	6	3	4	4	2	1	4	5	5
TANK LEAKING	2	0	2	0	0	1	0	0	0	1	0	1
AXLE SPG BKN.& WING CRACK, cant, notching	0	0	0	2	0	1	0	0	0	1	1	1
CARPENTRY REPAIR	1	1	0	1	0	0	0	0	0	0	0	0
ALARM SIGNAL DEFECT	0	1	0	1	2	0	0	0	1	0	0	0
BK.PIPE DEFECT	0	0	2	0	0	0	0	1	0	0	0	0
FP pipe broken	0	0	0	0	0	0	0	0	0	0	1	0
BK.CYL. LEAKING	0	0	0	1	0	0	0	0	2	1	0	1
BOLSTER SPG.BROKEN/WEAK	0	1	0	0	1	5	0	1	0	1	0	1
BUFFER DEFECT	3	6	2	4	6	5	1	3	3	3	1	3
Body rubbing	0	0	0	0	1	0	0	0	0	0	0	0
End shutter	0	0	0	1	0	1	0	0	0	0	0	0
Anchor link	0	0	0	1	0	1	0	0	0	0	0	0
Branch pipe	0	1	0	0	0	0	0	0	0	0	0	0
Dashpot	0	0	0	0	1	0	0	0	0	0	0	0
B. Dimantion	1	0	0	1	0	0	0	0	0	0	0	0
SIDE BEARER	0	0	1	0	0	0	0	0	0	0	0	0
Protector tube	0	0	1	0	0	0	1	0	1	0	0	0
Grease oozing	0	0	1	0	0	0	0	0	0	0	0	0
Equalizing stay	0	0	1	0	0	0	0	0	0	0	0	0
Draft Pad	0	0	0	0	0	0	1	1	0	0	0	0
NFTC	0	0	0	0	0	1	0	0	0	0	0	0
Brake binding	0	0	0	0	0	0	0	1	0	0	0	0
inner primary spring broken	0	0	0	0	0	0	0	0	0	0	0	1
Trolley frame replaced/crack	0	0	0	0	0	1	0	1	0	1	0	0
Lavatory flush valve not working	0	0	0	0	0	0	0	0	0	0	1	0
TOTAL	14	16	10	18	14	20	7	10	8	12	9	13

2.11.2 DETAILS OF MECHANICAL SICK COACHES (APR 2019 TO MAR 2020) :

REASONS	APR 19	MAY 19	JUN 19	JUL 19	AUG 19	SEP 19	OCT 19	NOV 19	DEC 19	JAN 20	FEB 20	MAR 20
WHEEL DEFECT	4	4	0	7	8	4	8	2	3	3	5	1
TANK LEAKING	0	0	0	1	1	2	0	0	1	0	0	2
AXLE SPG BKN.& WING CRACK, cant, notching	0	0	1	0	2	2	5	2	1	1	1	2
ALARM SIGNAL DEFECT	2	1	0	0	0	0	0	0	0	0	0	0
BK.PIPE DEFECT	0	0	1	0	0	0	0	0	1	0	0	0
FP pipe broken	0	0	1	0	0	0	0	0	0	0	1	0
BK.CYL. LEAKING	0	1	0	1	2	1	2	0	1	1	3	3
BOLSTER SPG.BROKEN/WEAK	0	0	1	3	1	1	2	2	0	0	0	0
BUFFER DEFECT	1	2	0	2	3	1	0	0	1	2	0	2
Branch pipe	0	0	0	0	0	0	0	0	0	1	0	0
Dashpot	0	0	0	0	0	0	0	0	0	0	3	0
B. Dimantion	0	0	1	0	0	0	0	0	0	0	0	2
western commode broken	0	0	0	0	0	0	0	0	0	0	2	0
Protector tube	0	0	1	0	1	0	0	3	0	2	1	0
Lavatory flush valve not working	0	0	0	0	0	0	1	0	0	0	0	0
Hytral Washer broken	0	0	0	1	0	0	0	0	0	0	0	0
NRV defect	0	0	0	0	0	0	0	0	1	0	0	0
TOTAL	7	8	6	15	18	11	18	9	9	10	16	12

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2.12 Position of TCR of last two years (2018-2020) :

S#	Month	2018-19	2019-20
1	Apr	18	28
2	May	26	27
3	Jun	28	24
4	Jul	26	30
5	Aug	26	26
6	Sep	28	27
7	Oct	33	26
8	Nov	28	30
9	Dec	40	26
10	Jan	38	30
11	Feb	30	25
12	Mar	33	17
TOTAL		354	316
Avg. per month		30	26

2.13 Month wise particulars of schedule repair of Coaches at Bilaspur of last 03 Years:

S#	Month	2017-18			2018-19			2019-20		
		A	B	C	A	B	C	A	B	C
1	Apr	261	146	30	252	124	18	182	128	28
2	May	277	117	30	261	134	26	256	118	27
3	Jun	277	145	27	251	127	28	202	100	24
4	Jul	245	110	32	245	109	26	210	104	30
5	Aug	279	120	37	270	153	26	206	107	26
6	Sep	225	101	25	262	133	28	211	138	27
7	Oct	256	171	32	243	99	33	229	105	26
8	Nov	273	105	33	231	140	28	220	91	30
9	Dec	251	115	36	260	128	40	150	79	26
10	Jan	238	149	27	254	90	38	235	119	30
11	Feb	226	150	25	176	93	30	230	152	25
12	Mar	349	113	24	156	91	33	202	71	17

2.14 Details of Bilaspur M/YD Terminating Trains being Attended (Terminal Attention Under RPC-4):

S#	Train no	Train Name	No. of days	Days
1	17481/82	BSP-TPTY	2 Days	Sat,Tues
2	18247/48	BSP-REWA	3 Days	Tue,Wed,Sat
3	12855/56	BSP-INTERCITY	Daily	All Days
4	22939/40	BSP-HAPA	1 Day	Thur
5	58113/14	ITR-TATA	Daily	
6	14719/20	BSP-BKN	1 Day	Fri

2.15 PF Return Trains nominated for Rolling IN Examination + CTS

Average no of Trains per day = 60 Trains/Per day

Average no. of Coaches being attended per Train = 20

Total average no. of Coaches being attended per day = 60 X 20 = 1200

3.0 Critical analysis, requirement of staff vis-à-vis workload and recommendations & suggestions :-**3.1 Critical analysis & requirement of staff vis-à-vis existing workload:**

To achieve objective effectively IR has over the years created large infrastructure and a good management system to ensure that it is fully utilizing all the resources at its disposal viz., human resources, workshops, sheds, Carriage & Wagon depots, etc. on a 24 x 7 x 365 basis and has focused on efficiency, operation and safety.

Depots/Workshops are energy involved in preventive maintenance of locomotives and rolling stock at prescribed intervals to upkeep their systems in safe working order till the next overhaul.

Coaching depot is set to mainly deal with the due schedules based on fixed periodicity of passenger carrying trains for Primary / Secondary / other end maintenance. Coach cleaning & washing along with watering are the activities performed during scheduled maintenance.

Based on the existing Cadre strength of Coaching Depot received from the Office of the Sr. DPO/BSP vide the Letter dated 28.05.2020 & the Data furnished by SSE/Coaching Depot/BSP dated 03.07.2020 & 28.07.2020, critical analysis of the existing Cadre vis-à-vis workload (having on roll strength of Coaching Depot/BSP is 454 (436 +18) against the sanctioned strength of 478 posts along with existing vacancy of 24 posts) has been done in view of Outsourcing, Modernization, Multi-Skilling, Need base Requirement and Optimum utilization of Manpower which is as under:

3.2 Section-wise assessment of Requirement of staff for Coaching Depot/BSP:**3.2.1 Primary Maintenance of Coaching Trains (at Washing/Pit Line) & Secondary Maintenance of Coaching Trains (Washing/Pit Line):**

Primary Maintenance work is being done in two Groups namely **(i) Under Gear Examination** and **(ii) Upper Gear Examination** and description of which in accordance with involvement of staff are as under;

During Secondary maintenance examination, mainly safety items are checked minutely and replaced if required and dry/wet cleaning, watering, brake-power checking, etc. are carried out.

At present, 24 Trains are maintained under Primary maintenance work and total 1793 Coaches are required to maintain with Primary maintenance work and average 256 Coaches are being attended to cope up the existing work load. (*details of Trains given in Para -2.10.1*) whereas 03 secondary Trains along with 108 Coaches are maintained under Secondary Maintenance work and average 15 Coaches are being attended for carrying out Secondary maintenance work. (*details given in Para-2.10.2*)

Under gear examination:

Presently, **59** staff [*Supervisor – 04, MCM-14, Gr. - I- 13, Gr. – 2, Gr.- 7, Helper-19*] are working in three shifts to carry out Under gear examination which consists of following activities;

- Examination and physical checking of wheel profile of all wheels of all coaches offered for examination.
- Examination of all suspension arrangements (bolster spring, axle box spring, dash-pot, shock absorber etc). Air brake testing and physical ensuring of brake power of each and every coach, leakage from complete pneumatic system of each & every coach, auxiliary reservoir, distributor valve, PEASD, passenger emergency valve.
- Through checking of all buffing and draft gear of each and every train.

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- Through checking of under frame for crack/failure of any vertical/horizontal member.
- Through checking of each and every part (anchor link, equalizing stay rod, bogie seat etc).
- All mounting arrangements are needed to be checked.
- Alarm chain system including Guard emergency valve needed to be examined and checked.
- Attention to major failure/public complaint at station.
- Maintaining documents of activities and Data related to under gear examinations work.

Upper gear examination:

Presently, **45** Staff [*Supervisor - 05, MCM-8, Gr. – I - 16, Gr. – II – 01. Gr.-III – 01, Helper -14*] are working in three shifts to carry out Under gear examination which consists of following activities;

- All berths are to be checked for its functioning i.e. berth chains, berth numbers, repair of rexine,
- All window glasses and window shutters to be checked & replaced if broken or damaged.
- All paneling work inside coach to be checked and replaced if damaged,
- All pipe line, water tanks to be checked for any leakage, replace or repair if defective,
- All wash basin, mirror, and mirror shelf to be checked for proper functioning, damage part to be changed if needed.
- All lavatory doors, its handle, latches to be checked and repair, if defective.
- Coach numbering to be done by suitable display board in case of coach is marked sick and attention and repair of all other passenger amenity items.
- Attention to major failure/public complaint at station.
- Maintaining documents of activities and Data related to under gear examinations work.

During the course of Study, it is observed that many of the activities like Coach Cleaning, watering, Bio Toilet maintenance work, DCPT maintenance, Pest & Rodent control cleaning & Carpentry work have been outsourced. In addition to this, it is also revealed that the Welding, Trimming and Plumbing work, which are being presently performed departmentally, can be carried out through Contractual Agency and the Study Team propose that these activities should be outsourced.

However, considering the need base requirement of manpower & keeping the proper monitoring of Contractual work in view, it is assessed that additionally 02 Supervisors but 04 Gr.-D (Asth. C&W) should be replaced with 04 Technicians, by virtue of general rules for promotion of Gr.-D (Asth. C&W) Staff to Technician Category, to maintain the work load smoothly so that excess deployment of Gr-D (Asth. C&D) staff may be right sized with the existing vacancy in Technician/Artisan Category.

Thus, in view of above, Study Team propose 106 staff (60+46) [Supervisors-11, Tech.-66, Gr.-D/Asth C&W-29] to cope up the work load of Primary & Secondary maintenance smoothly as same Staff are assigned to deal with both the maintenance work .

3.2.2 IOH (Intermediate overhauling) Shed (Sick Line attention):

Under gear examination and associated activities:

At present, **49** staff [*Supervisor- 02, MCM-14, Gr. – I - 10, Gr. – II – 02, Gr. – III – 07 Help-14*] are working to deal the Under gear examination and associated activities in at IOH Shed. The main activities being dealt are as under:

Running out of old bogie after lifting of coach body by means of 4 jacks. Through checking of corrosion in under frame member and application of anti-corrosion paint.

New over hauled trolleys with matching pair of wheels are to be put inside coach.

After putting of overhauled trolleys, all safety dimensions are to be maintained in coach,

for achieving the dimensions, the coaches are lifted 3-4 times for putting suitable sizes of packing under suspension arrangement. Air brakes testing with single car testing of complete coach with ensuring correct brake power of train.

Examination of all suspension arrangements (bolster spring, axle box spring, dash-pot, shock absorber etc). Air brake testing and physical ensuring of brake power of each and every coach, leakage from complete pneumatic system of each & every coach, auxiliary reservoir, distributor valve, PEASD, passenger emergency valve.

Through checking of all buffing and draft gear of each and every train.

Through checking of under frame for crack/failure of any vertical/horizontal member.

Through checking of each and every part (anchor link, equalizing stay rod, bogie seat etc).

All mounting arrangements are needed to be checked.

Alarm chain system Including Guard emergency valve needed to be examined and checked.

Recording of maintenance schedule/repairs in registers as per Railway Board's instructions.

To attention of major failure/public complaint at station.

I. Upper gear examination :

At present, **21** staff [Supervisor – 01 MCM-03, Gr. – I – 10, Gr. – II – 02, Gr. – III – 03 & Help -02] are involved to carry out the following activities of upper gear examination:

All berths are to be checked for its functioning i.e. berth chains, berth numbers, repair of rexine,

All window glasses and window shutters to be checked & replaced if broken or damaged.

All paneling work inside coach to be checked and replaced if damaged,

All pipe line, water tanks to be checked for any leakage, replace or repair if defective,

All wash basin, mirror, and mirror shelf to be checked for proper functioning, damage part to be changed if needed.

All lavatory doors, its handle, latches to be checked and repair, if defective.

Coach numbering to be done by suitable display board in case of coach is marked sick and attention and repair of all other passenger amenity items. Recording of maintenance schedule/repairs in registers as per Railway Board's instructions.

To attention of major failure/public complaint at station.

Note: -The same attention is needed on all sick coaches except replacement of trolleys.

In view of above, it is observed that in existing pattern of working system total **70** staff (49+21) are being utilized to meet the target of IOH of 35 Coaches per month.

As the IOH activities are carried out in General Shift on Six days in a Week (i.e. 24 days in a Month) to achieve the Target, the no. of on an average 1.5 Coach (35 Coaches/24 days) needs to be attended per day.

Considering the need base requirement of Manpower, 01 more Supervisor (SSE) is proposed to deploy in this Section and as above (in Para 3.2.1) 03 Gr.-D (Asth. C&W) should be replaced with 03 Technicians, by virtue of general rules for promotion of Gr.-D (Asth. C&W) Staff to Technician Category, to maintain the work load smoothly so that excess deployment of Gr-D (Asth. C&D) staff may be right sized with the existing vacancy in Technician/Artisan Category.

Thus, it is proposed that 71 (49+22) Staff [Supervisors-04, Tech.-54, Gr.-D/Asth C&W-13] should be deployed against the present deployment of 70 (49+21) staff (including 03 Supervisors).

3.2.3 Schedule Maintenance:

At present, **07** staff [MCM-02, Tech.-04 & Help.- 01] are involved to carry out the schedule maintenance work described as under:

Schedule 'A' is required to be performed every **month +/- 7 days** at the nominated primary maintenance depot within the normal primary maintenance time on a washing/pit line.

Schedule 'B' is required to be performed every **three months +/- 15 days** at the

omitted to inspect maintenance depot within the normal time allowed for primary maintenance on a washing line in rake. Coach need not be detached from the rake for purpose of this examination unless it requires such repairs which cannot be attended to on the washing line or within the prescribed maintenance.

Basically, during this maintenance work dash pot oil, Stanching, Buffer greasing etc. activities are done.

Based on critical observations and considering the need base requirement, it is assessed that the existing deployment of 07 staff is able to cope up the workload of Schedule maintenance.

Thus, it is proposed that present deployment of 07 Staff [Supervisors- 00, Tech.- 06, Gr.-D/Astt C&W-01] is justified for Schedule maintenance work.

3.2.4 **Miscellaneous associated activities:**

At present, 27 (MCM – 04, Gr. I – 10, Gr.- II – 01, Gr. – III – 06 Assistant C&W – 06) have been deployed to deal with the miscellaneous associated activities.

Basically, activities of Coaching Depot are Team work and most of the activities are inter-related with one another in chain manner.

Some of the miscellaneous associated activities carried out in routine maintenance work are as under;

- Fall plate and vestibule position to be checked and repair, if faulty.
- Rolling shutter of end panel to be checked for smooth functioning.
- PVC flooring to be checked and replaced, if needed
- Making of Elbow, Tee joint of watering pipe line as per the coach toilet requirement.
- Turning of iron rings required for packing etc.
- Replacement of defective window glasses of AC coaches.
- Replacement of curtains of all AC coaches once in 15 days.
- Curtain arrangement, its pipe, clips are to be checked for smooth functioning for curtain.
- Provision of fire extinguisher in all AC coaches and maintenance of emergency brake van equipment in brake van.

Maintenance of coach modification inside coaches for guidance of passenger.

- Through checking of emergency exit window for smooth functioning
- Details and day to day monitoring of all contractual activities and recording of day to day work/progress.
- Painting of exterior, interior of coaches and painting of destination, indication and number plate boards of trains/coaches.
- Welding in coach different parts as and where required.
- Monitoring of different compressors and other machines.
- Repair of berth etc and PVC flooring in coaches

It is worth to admit that miscellaneous activities have unknown volume of work and it is difficult to measure it on a specific scale.

Thus, based on discussion with concerned Supervisors and critical analysis of available data, it is observed that the present deployment of 27 staff [Supervisors- 00, Tech.-21, Gr.-D/Astt C&W-06] is justified to meet the requirement.

3.2.5 **Night Store (Coaching Yard) :-**

At present, 04 Staff (Gr. – I – 01, Gr. – III – 02 and Assistant C&W – 01) have been deployed to supply & record maintenance of Store materials required for maintenance work during the night shift.

During night shift of working time, some of the vital/non-vital materials are required to accomplish the maintenance work smoothly and therefore supply of required materials needs to be ensured as & when required at night.

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 Thus, **deeming the urgency of availability of requisite materials during the night shift in view, the existing deployment of 04 staff [Supervisors-00, Tech.-03, Gr.-D/Astt C&W-01] is justified.**

3.2.6 **LHB (Linke Holfmann Busch) Batch:**

At present, a batch of total **34** Staff [**14** (Supervisor- 01, Sr. Tech- 01, Tech-07 & Helper - 05) + **07** (Supervisor – 02, Tech-02 & Helper – 03) + **13** (Supervisor-01, Sr. Tech-1, Tech-02 & Helper – 09) have been deployed to carry out the special attention to newly the introduced LHB Coach for Under Gear examinations, Upper-gear examination & Sick line Attention respectively,

Newly introduced LHB coaches require separate attention and need to perform following activities to maintain these Coaches:

Under Gear examinations:

- Checking of micro-processor unit for ensuring proper functioning of braking system.
- Through checking of earthing equipment of all coaches.
- All damping arrangement to be checked for proper functioning.
- Draft-gear examination and provision of sims of suitable sizes, if required for jerk free travel of passenger.
- Examination and physical checking of wheel profile of all wheels of all coaches offered for examination.
- Examination of all suspension arrangements (bolster spring, axle box spring, dash-pot, shock absorber etc). Air brake testing and physical ensuring of brake power of each and every coach, leakage from complete pneumatic system of each & every coach, auxiliary reservoir, distributor valve, PEASD, passenger emergency valve.
- Through checking of all buffing and draft gear of each and every train.
- Through checking of under frame for crack/failure of any vertical/horizontal member.
- Through checking of each and every part (anchor link, equalizing stay rod, bogie seat etc).
- All mounting arrangements are needed to be checked.
- Alarm chain system including Guard emergency valve needed to be examined and checked.

Upper-gear examination:

- All berths are to be checked for its functioning i.e. berth chains, berth numbers, repair of rexine,
- All window glasses and window shutters to be checked & replaced if broken or damaged.
- All paneling work inside coach to be checked and replaced if damaged,
- All pipe line, water tanks to be checked for any leakage, replace or repair if defective,
- All wash basin, mirror, and mirror shelf to be checked for proper functioning, damage part to be changed if needed.
- All lavatory doors, its handle, latches to be checked and repair, if defective.
- Coach numbering to be done by suitable display board in case of coach is marked sick and attention and repair of all other passenger amenity items.

Sick line Attention:

During discussion & observations of above activities, it is observed that the construction & parameters are not alike to ICF Coaches (comparative feature is given in Para 1.9). In addition to above, conversion of Old Coaches in to LHB Coaches, D2, D3 & SS-I maintenance schedule is also required to deal with the LHB Coaches and 01 more Supervisor needs to be deployed to cope up the workload.

Therefore, it is proposed that 01 more Supervisor should be deployed to monitor the SS-I schedule maintenance work and as mentioned above (*in Para 3.2.1*) 04 Gr.-D (Astt. C&W)

should be replaced with 04 Technicians, by virtue of general rules for promotion of Gr.-D (Asth. C&W) Staff to Technician Category, to maintain the work load smoothly so that excess deployment of Gr-D (Asth. C&D) staff may be right sized with the existing vacancy in Technician/Artisan Category.

Thus, keeping the above facts in view, it is proposed that 35 Staff [Supervisors-05, Tech.-19, Gr.-D/Asth C&W-11] may be deployed to meet the requirement.

3.2.7 Platform/Main Yard Activities:

Presently, 96 [Supervisor-17, Tech-50 , Ministerial-02, Gr.-D'- 27] staff are working to carry out all the related activities for safe operation of Trains. The main activities being dealt are as under:

- Rolling in examination of all coaching trains to find out any hanging parts.
- Quick examination of all coaches to detect any broken parts springs etc.
- To detect any unusual sound during rolling in and rolling out examination and reporting of the same to base depot.
- In coming examination of all terminating trains, releasing of brakes, closing of all doors and windows of incoming train.
- Testing of locomotive before attaching locomotive in originating trains and ensuring air pressure continuity and issuing BPC to originating trains.
- To attend all public complaints related to Mechanical Deptt.
- Attaching/detaching of all PCV/OCV and its certification in BPC.

The whole activities of Platform working can be classified in three Categories namely- (I) Rolling IN/OUT Examination (II) Hydrant & CTS work (III) Office Work and requirement of Staff with the present workload is assessed as under:			
S#	Activities	Requirement	Total
1	Rolling IN/OUT Examinations are carried out in Three-Shifts (00:00-08:00 Hrs.,08:00-16:00 Hrs.,16:00-00:00 Hrs.) and each shifts contains a group of Staff for attending UP-Direction Train, DN.-Direction Train & Overlapping movement. Total 11 Batches comprises of 6 Staff (including LG/LR) each are being operated to maintain the workload.	11 Gangs X 6 staff	66
2.	Hydrant & CTS (Clean Train Station). Hydrant activities require 2 staff in Two-Shifts each & CTS work requires 2 staff in Three-Shifts each.	2 staff X 2 Shifts + 2 staff X 3 Shifts	10
3.	Office Work requires 02 Ministerial staff along with C&W Astt. to accomplish the paper & documentation work in General Shift.	02 + 01	03
	Total requirements of Supervisor for in each Shifts plus 01 overall in charge along with 02 Supervisor for monitoring special work/coordinating in various work and attending Miscellaneous activities plus RG/LR comes to	11+1+02+4	18
Total			97

Thus, keeping the outsourced activities in consideration, need base requirement and present work load in view, it is assessed that the 97 Staff [Supervisors-18, Tech.-56, Gr.-D/Asth C&W-21] may be deployed to maintain Platform/Main Yard Activities wherein 01 additional Supervisor is included and 06 Gr.-D (Asth. C&W) should be replaced with 06 Technicians, by virtue of general rules for promotion of Gr.-D (Asth. C&W) Staff to Technician Category, to maintain the work load smoothly so that excess deployment of Gr-D (Asth. C&D) staff may be right sized with the existing vacancy in Technician/Artisan Category.

3.2.8 **Linen & C&W Management :**

At present, **20** (SSE – 02, Sr. Clerk – 01, Gr. – I – 04, Gr. – II – 02, Gr. – III – 03 Assistant C&W- 08) staff are engaged to manage the Linen activities and some of the main activities are as follows:

- Distribution of washed linen in all AC coaches of all originating trains.
- Collection of used linen from all AC coaches from all terminating trains.
- Repairing of bed sheet, pillow cover, blankets by Stitching
- Physical counting of all linen on daily basis.
- Quality checking of all washed linen.
- General maintenance of all machines used in laundry for optimum outturn.
- Provision of additional linen in FTR (Full Tariff Rate) AC coaches.

During the Study, it is observed that major part of the Linen activities is outsourced and mainly monitoring/Supervisory works are being done by the Departmental Staff. However, keeping the long routes Trains in view & considering running of Special Trains or frequently being announced new Trains, the present deployment of 20 Staff is justified.

Thus, 20 Staff [Supervisors-02, Tech.-09, Minist-01 Gr.-D/Astt C&W-08] are sufficient to deal with the work load of Linen Management work.

3.2.9 **M & P (Machinery & Plant)/ Mill Wright Work :**

Presently, **06** (SSE-02, MCM-01, Tech-03) staff have been deployed to attend M & P work which are as under;

- Schedule maintenance of machinery and plants including material handling equipments.
- Break down maintenance of all M&P of the depot.
- Manufacturing of small items at machine shop of break-down machinery.

During the course of Study, it is revealed that one Effluent Testing Lab and one CNC operated Pit Wheel Lathe Machine Shop has been developed and thereby 02 Supervisors will be required to cope the work load properly. In addition to this, 02 EOT Cranes have been fitted in new IOH Shed and 02 EOT Cranes have been installed in old IOH Shed after modification of the IOH Shed which requires 02 Crane Driver to operate these Machines safely from Artisan Category.

Moreover, M &P (Machinery & Plant) Mill Wright works are required to be done to carry out the routine activities and to accomplish the assigned maintenance work properly in Coaching Depot (a list of important M&P items is mentioned under Para-1.7).

Keeping the importance & urgency of Machinery & Plant items (in case of Break-down) and additional work load due to new set up in view, it is assessed that 01 more Supervisors should be deployed and additional requirement of Artisan Category Staff may managed from other Sections as & when required.

Thus, the total requirement of Staff for this Section comes to 07 [Supervisors-03, Tech.-04].

3.2.10 **OBHS (On Board Housekeeping Service) & COIS Work :**

Presently, 10 staff (SSE-03, MCM-02, Gr.-I -02, Gr.-III-01, Astt C&W-02)are working to carry out following activities related to OBHS/COIS work.

- Maintenance of Maintenance of coach master of all base coaches.
- Monitoring of POH/IOH of all base coaches of BSP and timely dispatch/detachment of due POH/IOH of coaches.
- Preparation of all figures of coaching depot for appraisal to higher officers.
- Daily checking of feed-back form of incoming trains having OBHS facility and

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- To go through each and every complaint and imposition of penalty accordingly.
- To monitor the material issued for each and every train having OBHS.

Thus, keeping the Passenger Safety & amenities in view and considering the gravity of Passenger's complaints & grievances, the present deployment of 10 staff [Supervisors-03, Tech.-05, Gr.-D/Astt C&W-02] is justified.

3.2.11 Inspection Carriage (RA)/Saloon Maintenance:

At present, **18** (MCM- 02, S/AI- 13, Assist. C&W – 03) staff have been deployed to carry out the activities related to Inspection Carriage (RA)/Saloon Maintenance like General repair, cleaning, up keeping of Inspection carriages and to accompany inspection carriages.

Thus, based on the discussion with concerned Supervisor and keeping the sensitivity & importance of the Inspection Carriage (RA)/Saloon in view, it is assessed that the present deployment of 18 Staff [Tech.-15, Gr.-D/Astt C&W-03] is justified.

3.2.12 Store/Rolling Stock :

At present, **19** (SSE-01, Ch OS-01, OS-02, Sr. Clerk – 01, Jr. Clerk-03, MCM-03, Gr. – I - 05, Gr. – III – 01 Assistant C&W- 02) & **04** (OS-02, Tech-02) Staff are working in Store & Rolling Stock Section respectively.

The combined activities of both Store & Rolling Stock which are needed to be dealt by total **23** (19 + 04) staff in their routine work are as under

Store section:

- Daily issue of all items of imprest store, Accountal & Record keeping work.
- Daily monitoring of all items of imprest store and placing demand to GSD of the items falling short.
- Local purchase of Stock & Non-Stock Items.
- Disposal of unserviceable items to store on DS-8.
- Close monitoring of issuance of imprest items for its consumption within the limit of EAC.
- General liaisoning with other coaching depot, workshops for receipt of items/material falling short.
- Preparation of demand of the items not covered under imprest store.
- Proper stacking of items for easy identification and its disposal.
- Loading/unloading of material in depot as well as in different depots and workshops.

Rolling Stock

- DCPT refilling.
- Dealing of Requisition.
- Maintaining Imprest.
- Dealing of RA Maintenance record.
- Dealing of Truck billing, Pantry car billing, various Challans.
- Record maintenance of T&P and M&P items/Furniture records & DS-8.

In terms of Critical analysis, it is revealed that 10 staff are involved in maintenance of Ledger of Stock & Non-Stock items, DMTR, Online Requisitions, Scrap disposal, movement of Wheels & Trolleys to & from Workshop which are not justified in present working culture of Multi-Skilling and it is assessed that 07 Staff from C&W Cadre are sufficient to cope up the existing workload. Furthermore, on critical analysis of the workload related to dealing of Stock Items/Non-Stock Items, Preparation of Requisitions for collection of Store Materials from GSD/BSP & R, DS-8 of Store matter pairing and supply of Store Materials on Challan to Sick Line, Yard, IOH Shed & Other Shops, it is observed that 06 Ministerial/Clerical Staff instead of present deployment of 07 staff, would be sufficient to meet the requirement & thereby 01 Ministerial/Clerical Staff is

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found surplus and the surplus Staff may be deployed to elsewhere in C&W Units as per requirement to rightsizing the existing cadre strength of Ministerial Category of Coaching Depot.

Therefore, it is proposed that **13** [19 – 02 MCM –03 Tech-01 Clerk.] Staff are justified to carry out the work load of Store Section and thereby **05** Staff are found surplus for this section and it is recommended that they may be redeployed to their designated work in Core activities.

Moreover, keeping the sensitivity, importance of various types of miscellaneous associated works and need base requirement in view, it is assessed that the present deployment of 04 Staff for Rolling Stock Section is sufficient.

Hence, in view of above, it is proposed that the combined Strength of 17 Staff (13 Store Sec.+ 04 R/Stock sec.) is justified instead of present deployment of 23 Staff (19+04) and thereby 06 Staff (05 Tech+01 Clerk) are found surplus which may be deployed in Core activities as per requirement.

Thus, based on critical observations vis-à-vis need base requirement for the merged Section of Store & Rolling Stock, it is assessed that the total 17 Staff [Supervisors-01, Tech.-06, Minist.-06 Gr.-D/Astt C&W-02] are sufficient to meet requirement of manpower for the combined Section.

3.2.13 **Establishment/ Office/ Pass Section/Computer work/Technical assistance Work (including Contractual work):**

At present, **08** (Ch. OS – 02, MCM-02, Assistant C&W – 03, Peon – 01) Staff have been deployed to deal with Muster rolls, OT, TA, CEA & all Establishment related matters, Pass & PTO, Contractual bills and in addition to this, preparation of MCDO/PCDO Data & Documents maintenance work along with Computer presentation and Technical assistance work.

Considering the above facts, it is observed that the 08 staff working under Establishment Section has to maintain the Muster roll/Sheets, Leave account and other Establishment matters of On –Roll 436 staff. In addition to this, they have to deal avg. 07 OT Bills/Month, avg. 105 TA Bills per month, avg. 270 CEA Bills per Year and they need to maintain approx. 74 no. of Registers and 53 no. of Files.

Thus, in view of above facts and need base requirement, it is assessed that the present deployment of 08 Staff [Minist.-02, Tech.-04, Gr.-D/Astt C&W-02] for smooth compliance of Establishment matters of 436 working Staff of Coaching Depot is justified. However, based on critical observations, it is proposed that the deployment 02 Gr.-D (Astt. C&W) should be replaced with 02 Technicians, by virtue of general rules for promotion of Gr.-D (Astt. C&W) Staff to Technician Category, to maintain the work load smoothly so that excess deployment of Gr.-D (Astt. C&D) staff may be right sized with the existing vacancy in Technician/Artisan Category.

3.2.14 **Smithy Shop/T& P (Tools & Plant):**

At present, **09** (MCM – 07, Gr. – I – 01 and Assistant C&W – 01) are working in this section.

A Smithy works involves heating of a Metal Stock to a desired temperature, enable it to sufficient elasticity, followed by the operations like Hammering, Bending, Pressing etc. to give it desired shape.

By virtue of critical observations, Study Team opine that in present scenario modern equipments, Tools and Plants are being utilized and many of the materials are procured in readymade condition which enable to direct fixings & fittings in comparison to olden pattern of manufacturing desired devices and Tools & Plant items. However, importance of smithy shop cannot be minimized as activities of Smithy Shop are closely associated with overall maintenance work being done in Coaching Depot but at the same time, Work Study Team suggest that Smithy Shop/T&P Section may be combined with M & P & Mill

With this arrangement, make a single section of M&P and T&P Shop so that the Staff working in both the separate Sections may become Multi-Skilled and can be able to perform various activities related to this nature of work.

Thus, keeping the importance urgency of Tool & Plant, it is assessed that existing deployment of 09 Staff [Supervisors-00, Tech.-08, Gr.-D/Astt C&W-01] is justified and to maintain the workload.

3.3 Critical analysis in terms of Outsourcing Scope:

During the course of study, it is observed that some of the non-core activities which are carried out by departmental Staff may be outsourced through contractual Agency to achieve economy and to get the availability of more man power for Core activities. However, many of the activities such as ART & RTTV conversion, Wheel coach conversion, Mechanized coach cleaning, OBHS, Pest & rodent control, Bio Toilet Maintenance, DCPT maintenance, Pantry Car (LPG gas pipe line), Laundry (Boot laundry and mechanized laundry), Hiring of Truck, Carpentry work etc. have already been outsourced.

In addition to above, the Study Team propose that the following activities should be outsourced for saving Manpower Costs along with improving work efficiency :

- I. Welding work
- II. Plumbing /Pipe Fitting Work
- III. Trimming Work
- IV. Painting Of coaches.

Thus, based on critical observations, it is assessed that after implementation of outsourcing of above mentioned activities approx. 20 Staff engaged in these activities would be found Surplus and there by the existing Cadre may be reduced accordingly.

3.4 Deployment of Staff at Other Places/Units/Offices:

During the Study, it is revealed that **18** Staff have been posted under the Cadre Strength of Coaching Depot/BSP but deployed at other Units/Offices. (Details given in Pa-2.2.1).

Thus considering existing workload, it is proposed that these 18 Staff should be deployed at their actual posting place Coaching Depot/BSP to cope-up the workload and requirement of manpower.

87959/2020/Q/a-SDGM/HQ/SECR Summary of Section wise "Existing and Proposed Staff strength :

S#	Name of Section	Present deployment of staff				Proposed Deployment of Staff			
		Suprs.	Tech.	Mins.	Gr.-D	Suprs.	Tech.	Mins.	Gr.-D
1	(Washing/Pit Line) Primary Maintenance & Secondary Maintenance	09	62	00	33	11	66	00	29
2	IOH Shed (Sick Line attention)	03	51	00	16	04	54	00	13
3	Schedule Maintenance	00	06	00	01	00	06	00	01
4	Miscellaneous associated activities	00	21	00	06	00	21	00	06
5	Night Store	00	03	00	01	00	03	00	01
6	LHB Batch	04	15	00	15	05	19	00	11
7	Platform/Main Yard Activities:	17	50	02	27	18	56	02	21
8	Linen (Laundry) Management	02	09	01	08	02	09	01	08
9	M & P (Machinery & Plant)/ Mill Wright Work	02	04	00	00	03	04	00	00
10	OBHS (On Board Housekeeping Service) & COIS Work	03	05	00	02	03	05	00	02
11	Inspection Carriage (RA)/Saloon Maintenance	00	15	00	03	00	15	00	03
12	Store Section (Depot Store/Rolling Stock)	01	11	09	02	01	06	08	02
13	Establishment/ Office/Computer work/Technical Assistance work	00	02	02	04	00	04	02	02
14	Smithy Shop/T& P (Tools & Plant):	00	08	00	01	00	08	00	01
15	Deployment of Staff at other Offices/Units:	00	10	01	07	00 *18 staff can be utilised in different sections of Depot as per need.			
TOTAL		41	272	15	126	47	286	14	107
Grand Total		454				454			

3.6 Conclusion :

It is observed that out of 454 on roll strength, actual 436 staff are utilised for maintaining the workload of Coaching Depot/BSP and 18 staff are working at other units/offices since long time whereas total requirement of staff for Chg. Depot comes to 454. Hence considering the existing workload, it is proposed that these 18 Staff working at other units/offices should be deployed at Coaching Depot/BSP to cope-up the workload and meet the requirement of manpower for the Depot.

Thus, out of sanctioned of 478 posts, 24 vacant posts of Technician/Artisan category are found surplus.

Summary of Sanctioned, Actual & Proposed Cadre strength of Coaching Depot/BSP:

S#	Design./Category	Sanction	Actual	Vacancy	Proposed Requirement	No. of surplus post to be surrendered
1	SSE	37	29	08	37	00
2	JE	10	12	-02	10	00
3	Technician/Artisan	310	272	38	286	24
4	Ministerial/Clerical	14	15	-01	14	00
5	Gr.-'D'	107	126	-19	107	00
Total		478	454	24	454	24

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3.7 RECOMMENDATIONS & SUGGESTIONS :-

As it is evident that Capital & labour are the basic factor of an organization and thereby human resource is one of the most indispensable assets of the organization. Continuous updating & designing of job descriptions of, reduction of number of Categories for job enrichment through Multi-skilling, training and responsibilities are need of the time. Therefore, rightsizing of Manpower substantially optimizes a system to work with requisite economy with more productivity.

Moreover, the assessment of manpower aims to have a requisite staff at right place at a given point of time to enable the organization to achieve its short term and long term goals as the process of critical analysis involves an appreciation or evaluation of existing manpower and ensuring the deployment of manpower according to the requirement of specific jobs.

Thus, on the basis of above observations and critical analysis, following recommendations/suggestions are made:

RECOMMENDATIONS:

- 3.7.1** It is recommended that **24 vacant posts of Technician/Artisan Category**, identified as *surplus* to the need based requirement of manpower for Coaching Depot/BSP, should be surrendered to achieve efficiency & economy whereas the total sanctioned strength is 478, actual strength is 454 (436+18), existing vacancy is 24 and the proposed requirement of Staff strength is 454.
- 3.7.2** It is recommended that some Non-core Activities of Coaching Depot/BSP (being carried out Departmentally) such as Welding work, Plumbing /Pipe Fitting Work, Trimming Work, Painting of coaches should be outsourced and cadre to be reduced accordingly

SUGGESTIONS:

- 3.7.3** To enhance the potentiality of the employees, it is suggested to make arrangement for imparting necessary Training/Learning with provision of modern Tools & Plants to make them able to discharge their duties/responsibilities effectively as there is always important to be upgraded as per the requirement.

4.0 FINANCIAL EVALUATION & RESULTS:-**Savings due to surrender of 24 identified surplus vacant posts (Tech./ Artisan) :-**

Based on the critical analysis for the need base requirement of manpower, the 24 posts of Tech./ Artisan have been identified as surplus from the overall sanctioned Cadre of Technician/Artisan Categories and thereby the calculation of monetary savings is based on average GP/Level of Rs. - 2400/-/L-4 which is tabulated as under:

S#	Designation	Scale of pay	Grade pay/	No. of Post to be surrendered	Mean pay	Cost per Month per staff (Mean Basic pay+ D.A. @ 17%)	Total cost per month (in Rs.)	Total cost per year (in Rs.)
1	Tech. / Artisan	25500-81100	2400 /L-4	24	53300	62361	1496664	17959968
TOTAL				24				17959968

Thus, recurring savings to the tune of Rs. 17959968 say Rs. 179 Lakhs Per annum can be achieved due to surrender of 24 posts (Technician/ Artisan) from sanctioned cadre of Coaching Depot/BSP of Bilaspur division and surrender memorandum to be issued by Sr. DPO/BSP/SECR accordingly.

