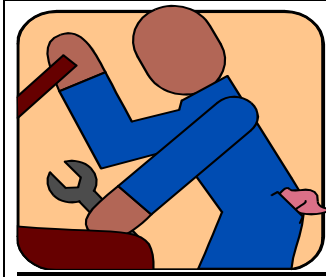


No.G.275/WSSR – 882021/2020-21



WORK STUDY TO REVIEW
THE STAFF STRENGTH
AT EWS/AJJ INCLUDING
MINISTERIAL STAFF

2

SOUTHERN RAILWAY

PLANNING BRANCH

G.275/WSSR-882021/2020-21

WORK STUDY TO REVIEW
THE STAFF STRENGTH AT EWS/AJJ
INCLUDING MINISTERIAL STAFF

STUDIED BY

WORK STUDY TEAM
OF
PLANNING BRANCH

JUNE - 2021



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ACKNOWLEDGEMENT

The study team is thankful to Dy.CE/EWS/AJJ, XEN/FBW, AWM/EWS (Co-ordinating Officer), Ch.OS/PB and Account & Store staff for their valuable guidance and assistance for successful completion of the study.

Again, the study team thankful to **AWM/EWS & SSE/Planning/PCO** the Co-ordinating Officer and Co-ordinating Supervisor respectively who has rendered great co-operation in analyzing the data and thoroughly discussed the pros and cons, for proper completion of the study in time.

(ii)
AUTHORITY

Annual Program of work studies for the year 2020-21.

(iii)
TERMS OF REFERENCE

Work study to review the staff strength vis-à-vis workload at Engineering Workshops and Flash Butt Welding shop including Ministerial staff.

(iv)
METHODOLOGY

The following methodologies have been adopted in carrying out the study.

1. Collection and compilation of data.
2. Interaction with officers, supervisors and staff.
3. Application of Allowed time norms, yardstick, bench mark and need base where ever required.

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(iv)

SUMMARY OF RECOMMENDATIONS

Recommendation No.1

Machine Shop:

21 vacant posts of Tech-I in GP Rs. 2800/- are found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank
(Total-21 posts)

Recommendation No.2

Black Smithy shop:

11 posts of Tech – I in grade pay Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank
(Total-11 posts)

Recommendation No.3

Points & Crossing Shop:

27 vacant posts of Tech – I in grade pay Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank
(Total-27 posts)

Recommendation No.4

Fitter & Signal Fitter shop:

A) One vacant post of Sr.Tech in GP Rs. 4200/- and 3 Posts of Tech.Gr.I in GP Rs. 2800/- are found excess to the requirement in Fitter Shop and the same may be surrendered and credited to the Vacancy Bank.
(Total – 4 posts)

B) 6 post of Sr.Tech in GP Rs. 4200/- and 6 Posts of Tech.Gr.I in GP Rs. 2800/- are found excess to the requirement in Signal Fitter Shop and the same may be surrendered and credited to the Vacancy Bank.
(Total -12 posts)

(Net Total-16 posts)

Recommendation No.5

Structural Shop:

The following posts are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

- 2 posts of Sr.Tech in GP Rs. 4200/-,

- 37 posts of Tech – I in GP Rs. 2800/-,
- 4 Posts of Tech – II in GP Rs.2400/- and
- 4 posts of Tech – III in GP Rs. 1900/-

(Total - 47 posts)

Recommendation No.6

Welding Shop:

27 posts of Tech – I in GP Rs. 2800/- and one post of Tech – II in GP Rs.2400/- are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

(Total - 28 posts)

Recommendation No.7

Glued Joint Shop:

One post of Tech – I in GP Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

(Total - 1 post)

Recommendation No.8

Loading Shop:

One post of Sr.Tech in GP Rs.4200/- and 2 posts of Tech.Gr.I in GP Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank

(Total-3 posts)

Recommendation No.9

Tinker Shop:

The following posts are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

- 3 posts of Sr.Tech in GP Rs. 4200/-,
- 2 posts of Tech – I in GP Rs. 2800/-,

(Total - 5 posts)

Recommendation No.10

Paint Shop:

The following posts are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

- One post of Sr.Tech in GP Rs. 4200/-,

4

➤ 2 posts of Tech – I in GP Rs. 2800/-,

(Total - 3 posts)

Recommendation No.11

Millwright Shop:

25 posts of Tech.Gr.I in GP Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank

(Total-25 posts)

Recommendation No.12

FBW Shop:

9 posts of Tech.Gr.I in GP Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank

(Total-9 posts)

Recommendation No.13

Electrical (EOT):

2 vacant posts of Tech-I in GP Rs. 2800/- and one vacant post of Tech-III in GP Rs.1900/- are found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.

(Total - 3 posts)

Recommendation No.14

PCO (Progressmen & Planner):

One post of Sr.Tech in GP Rs. 4200/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.

(Total-1 post)

Recommendation No.15

Technical Supervisors:

5 posts of SSE in GP Rs. 4600/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.

(Total-5 posts)

Recommendation No.16

Ministerial Staff in Works Branch:

11 vacant posts of OS in GP Rs. 4200/- and 3 vacant posts of Sr.Clerk in GP Rs. 2800/- are found excess to the requirement and the same

5

may be surrendered and credited to the Vacancy Bank.

(Total -14 posts)

Recommendation No.17

Ministerial Staff in Personnel Branch:

2 vacant posts of OS in GP Rs. 4200/-, 2 vacant posts of Sr.Clerk in GP Rs. 2800/-, one vacant post of Sr. Translator in GP Rs. 4600/-and one vacant post of MV driver in GP Rs. 2800/ are found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.

(Total - 6 posts)

Grand Total -225 Posts



CHAPTER – I

1.0 INTRODUCTION

- 1.1 The present Engineering Workshops, Arakkonam was originally established at Royapuram, started as a points and crossing repair shop by the erstwhile MSM Railway around the year 1885 and later shifted to more spacious surroundings to the present location around the year 1900, situated 1.0 kms from Arakkonam Railway Station. The work shop covered area is 4 hectares against the total area of 20.43 hectares.

This workshop mainly caters to the **track and bridge** components for the Civil Engineering department of Southern Railway & South Western Railway (Open line & Construction). In addition, the requirement of the other Railways (Open line & Construction) is also met with based on the demands.

1.2 Salient Statistical data of EWS/AJJ:

Total area	20.43 Hectares
Covered area	4 Hectares
Sanctioned strength as on 01.04.21	628
Actual strength as on 01.04.21	397
Vacancies	231

1.3 Flash Butt Welding Plant:

The another important **track work as Rail weld joints by Flash Butt Welding Plant** functioning under EWS was established in the year 1965. The FBW Plant caters to the needs of Welded Rail Panels for Southern Railway as well as South Western Railway. The covered area is 0.8 hectare against the total area of 27.48 hectares.

At present FBW plant is under repair from Aug-2018 and production stopped.

An attempt has been made to arrive at the manpower requirement of all Non Gazatted staff (Group – C & D) working in EWS/AJJ Including Ministerial Staff based on the existing workload, deployment of workforce for various activities in various sections/units and applying the concept of Multitasking for a range of different types of work wherever required.

CHAPTER-II

2.0 PRESENT SCENARIO

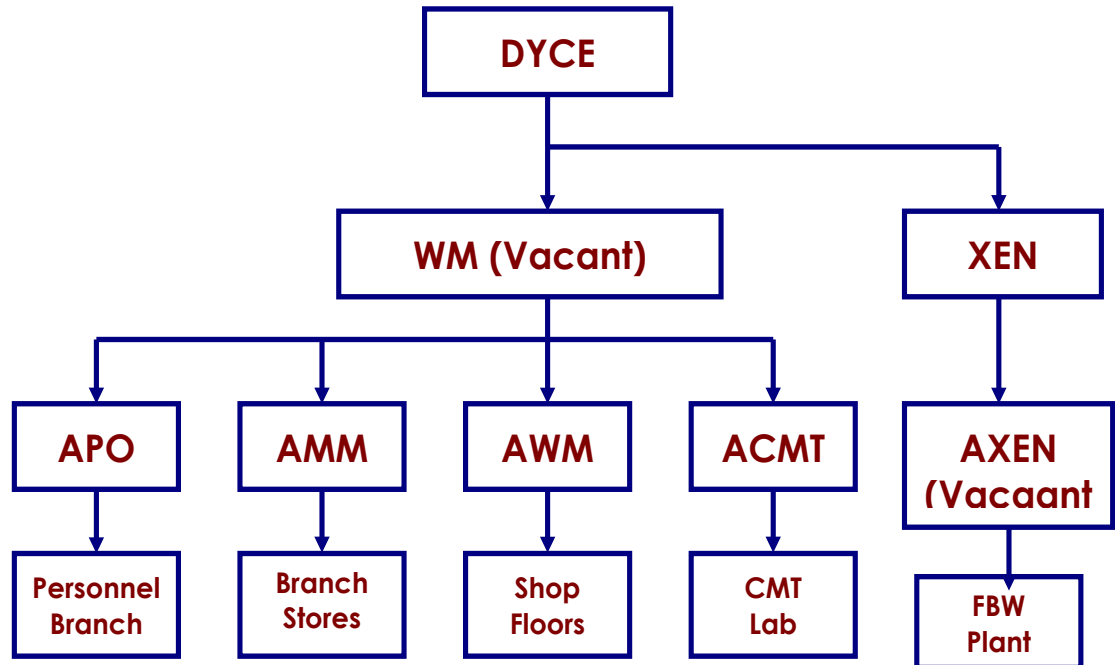
The sanction and actual (Both Group "C" & "D") statement as on 01.04.2021 of EWS/AJJ including Ministerial staff by PB/o/AJJ. The actual working staff is 397 against the staff strength of 628 and the vacancy is 231. The staff strength statement is placed in Annexure-I.

Out of 628 sanctioned posts, some of the posts are not covered in this work study. There are tabulated as below.

Sl.No	Category	No of Sanctioned posts	Remarks
1	Safety officer (Non – Gaz)	1	Ex-Cadre @ EWS/AJJ
2	Jr. Instructor (BTC)	1	
3	SSE/Electrical	2	MAS division control
4	SSE/Drawing	1	Engg/HQ control (One SSE/Works & JE/Drg are working @ EWS/AJJ)
5	JE/Drawing	-	
6	SSE/Works	-	
7	CMS/Lab	6	CMT/LW/PER control (2 CMS & 4 CMA are working @ EWS/AJJ)
8	CMA/Lab	-	
9	Sr.SO/Accounts	1	PFA & CAO control
10	Apprentice Tech-III	-	2 Tech-II is under apprentice training
	Total	12	

Hence, the work study team has taken the sanctioned strength of 616 (628-12) for the entire manpower calculation.

2.1 ORGANISATION SETUP



Note: At present WM & AXEN posts are vacant and AWM is looking after the shop floors.

2.2 The working hours of the workshop:

Monday to Friday -	07.00 to 11.30 hrs.	}	= 8 ½
	12.30 to 16.30 hrs.		
For 5 days (5 x 8 ½)			= 42.30 hrs
Saturday -	07.00 to 12.00 hrs.		= 5.00 hrs
			= 47.30 hrs

Total working hours per week = 47 hours and 30 minutes.

EWS is mainly intended to cater to the growing demands of Civil Engineering Department. In addition to meeting the needs of home railway, the requirement of other railways are also met with.

This workshop is functioning under two different heads viz., Production Shops and Servicing & Maintenance shops/sections. The details are tabulated below.

2.3 **Production Shops:**

Sl.No	Name of the Shop	Code No	Remarks
1	Black Smithy	602	-
2	Points & Crossing	603	-
3	Fitter	604	Work Stopped from Jan - 20
4	Signal Fitter	605	Work Stopped from Jan - 20
5	Structural	606	-
6	Glued Joint	608	-
7	Tinker	609	Work stopped from April-18
8	Flash Butt Welding	616	Work Outsourced

2.4 **Service & Maintenance Shops:**

Sl.No	Name of the Shop	Code No	Remarks
1	Machine	600	Turning, planning, slotting etc
2	Welding	607	Gas cutting & welding of all shops
3	Loading	608	Loading & Unloading of materials
4	Painting	610	Painting of all finished products
5	Millwright	612	Machinery maintenance
6	Electrical	617	Machinery maintenance & EOT Crane operation

2.5 **Core Activities:**

Sl.No	Shop	Nature of work
1	Structural	Steel Bridge Girders – Welded type Plate Girders, Shallow type Girders, Riveted type Open Web Girders.
2	Points & Crossings	Curved Switches.

3	Blacksmithy	Joggled Fish Plates, Bent Fish Plates, Buffer Stops, Slide Chairs.
4	Fitter	Push Trolley, Modified Rail Dolly, Point Screw Clamp, conversion of BRN wagons to 5 Tier End Unloading Rakes, Steel Channel Sleepers.
5	Signal Fitter	Lifting Barrier Gates (Modified), Winch for Lifting Barriers.
6	Glued Joints	Glued Insulated Rail Joints.
7	Machine	Machining activities for sister shops such as Drilling, Turning, Milling, Shaping, Slotting, etc. and maintenance of Tool Room.
8	Welding	Welding and gas cutting activities for sister shops.
9	Paint	Painting activities for all finished items.
10	Millwright	Maintenance of all machinery and vehicles.
11	Electrical	Maintenance of all machinery and Electrical Sub-stations
12	FBW Plant Welding	Welded Rail Panels - 52kg/60kg-130m (10 Rail panels).
13	T & P Depot / GOC	The Tools & Plants Depot at GOC functions under the technical control of EWS and supervised by SSE/Bridges. The activities of T&P Depot include fabrication of light structures such as PF Shelters, Foot Over Bridges and repairs to small tools and plants.

2.6 **Products Range:**

The following significant products are regularly manufactured in the Civil Engineering Workshops are listed below.

2.6.1 **Track Items :**

- Curved Switches
- Joggled Fish Plates

- Glued Insulated Rail Joints
- Flash Butt Welded Rail panels

2.6.2 **Bridge Items :**

- ✓ Riveted type Plate Girders
- ✓ Welded type Plate Girders
- ✓ Shallow type Girders
- ✓ Open Web Girders
- ✓ Composite Girders
- ✓ Steel Channel Sleepers

At present welded type girders only manufactured

2.6.3 **Light Structures (T & P Depot) :**

- Passenger Platform Shelters
- Foot Over Bridges

2.6.4 **Trolleys :**

- Push Trolleys
- Modified Rail Dollies

At present work stopped due to shortage of materials.

2.6.5 **Signal department items :**

- Lifting Barrier Gates (Modified)
- Winch for Lifting Barriers
- Electronic Hand Signal Lamps (LED based)

At present work stopped due to shortage of materials.

2.6.6 **Mechanical department items :**

Conversion of BRN Wagons – from 3 tier to 4/5 tier.

2.7 **Flash Butt Welding Plant:**

Flash Butt Welding Plant was functioning with ESAB (Sweden) make stationary Rail Welding plant commissioned during 1986. The existing plant has served more than 32 years beyond its codal life of 15 years.

The departmental ESAB welding machine has been suspended since

Aug-2018 due to frequent failure of machine. Currently Flash butt welding is carried out using mobile flash butt welding plants by available two private agencies.

2.7.1 Other particulars:

Total area	:	24.78 Hectares
Covered area	:	0.8 hectares
Types of panels	:	60/52/Kg – 130m long
Man power	:	15 staff as on April-2021

This shop works as a separate entity and has XEN and AXEN (presently vacant) exclusively to look after the production works. This shop is situated at about 1 km (Approx) away from EWS / AJJ workshop. The following types of welded rail panels are produced.

3 rail panel	-	52 kg
3 rail panel	-	60 kg
10 rail panel	-	52 kg
10 rail panel	-	60 kg

The welded joints are finally tested by departmental staff using ultrasonic flaw detector (USFD) for any internal crack, lack of fusion etc.

Hardness and transverse test carried out one in 1000 joints and macro examination one in 5000 joints. The defect free welded panels are transported to the loading platform for stacking.

2.7.2 Zinc Metalizing of Rails:

The Railway Board has advised to give protective coating of new rails/welded panels Zinc metalizing followed by Acrylic Polyurethane painting for the use in corrosion prone area.

Metalizing Process sequence:

- Shifting of Finished 10 Rail panel to Metalizing area

- Cleaning of grease, paint etc by using petroleum Hydrocarbon solvent
- Sand blasting by coarse sand of size 600-1700 microns
- Zinc spray by Electric Arc Method within 4 hrs of blasting
- Check for Average coating thickness by ELCO meter 140-150 microns (Minimum local thickens shall be 115 microns)
- Sealer coat with Aliphatic Acrylic Polyurethane paint with brush/spray for 50 microns

Check for average overall thickness 190-200 microns

2.8 **PCO (Production Control Organisation):**

Functions of PCO:

Production Control Organisation, shortly termed as PCO, it regulates and stimulates production, fixing of allowed time, eliminates wastages, simplifies planning and leads to higher productivity by aiming to produce the right product in the right quantity to the right quality at the right time and by the most economic methods.

The PCO comprises of four sections namely:

1. Planning.
2. Rate Fixing,
3. Progress and
4. Inspection.

2.8.1 **PLANNING**

The functions of the Planning Section are

- Annual Material Planning of Stocked items
- Process Planning.
- M&P planning.

2.8.2 **RATE FIXING**

The functions of the RF section are:

- ✓ Fixing the Allowed Times for the manufacturing of all the products of EWS/AJJ, duly conducting Time Studies and incorporating the same in the Process Sheets furnished by the Planning Section. These allowed times have to be approved by AWM/WM.
- ✓ Revision of Allowed Times when an improved process is adopted or when new machinery is commissioned which will result in less process time.
- ✓ Calculation of the Rate of each product as applicable to Home Railway, Foreign Railway and Private Concerns (Home State & Other States).
- ✓ Preparation of Rate List Booklet annually. The rate list should have been vetted by FA&CAO/WST/PER.
- ✓ Preparation of PCDO statements to be sent to Headquarters during the 1st week of every month.
- ✓ Furnishing of Rates for the items shown in the Issue Notes received from production shops and then forwarding the issue notes to Sr.S.O./Accounts.

2.8.3 **PROGRESS SECTION**

The functions of the Progress Section are:

- Opening of work orders for the indents received.
- Preparation of Route Card and incentive job cards and issuing to the shops.(Now working as Non incentive scheme)
- Preparation of monthly production programmes for all shops based on the availability of raw materials and DW staff strength.
- Regularly monitoring the progress of manufacture of the programmed works.
- Entering of issue details and fresh indent details in the load file and preparation of updated load statement and put up to DY.CE every week.

- Preparation of ground stock statement of produced items and put up to Dy.CE, WM and AWM every week.
- Advise the consignees to arrange for lifting of manufactured items.
- Issuing of produced items to various consignees duly obtaining the issue orders from AWM/WM.
- Preparation of outturn statement for the monthly Production Review Meeting.
- Preparation of PCDO statements and submitting to HQ.

2.8.4 **INSPECTION SECTION**

- ✓ Quality control of all manufacturing items of EWS/AJJ by inspection at various stages and final inspection of products.
- ✓ Co-ordinating with Template section while preparing various Templates, Jigs & Fixtures for Girder fabrication and getting approval from RDSO/HQ.
- ✓ Co-ordinating with ACMT Lab for Qualification of Welders both Railway and Contract.
- ✓ Co-ordinating with RDSO/HQ inspectors during Girder inspection.

2.9 **Technical Supervisor (Ex-Cadre on EWS/AJJ):**

One post of Safety officer and one post of Jr. Instructor is the Ex - cadre posts on EWS/AJJ account. At present these posts are vacant and the administration may initiate to fill the Ex-cadre posts.

2.10 **Ministerial staff (Works Branch):**

The ministerial staffs in Works branch cadre are working in Time office, Administrative office, Store section, General section and Account section. The duties and responsibilities are explained in chapter –III.

2.11 **Ministerial staff (Personnel branch):**

Generally, the personnel branch staff is working of staff matters like appointment, salary bills, settlement, welfare activities etc.

The common Activities involved in Personnel Branch:

2.11.1 Establishment/Cadre Section:

- Appointments
- Transfers (within Division)
- Inter Railway/Inter-Divisional Transfers.
- Fixation of pay, stepping up of pay etc.
- Preparation of statements like MA Report, quarterly, half yearly, Lok Sabha questions, Vacancy Statements etc.
- Promotions (Non-selection)
- Conducting selections.
- Dealing with V.R. Cases.
- Maintenance & Publication of seniority lists
- Registration of Transfer requests and giving acknowledgements.
- Making entries in SR.
- Dealing with cases of purchase of movable and immovable properties.
- Issue of NOC for obtaining pass port to visit foreign countries.
- Sending SRs and receiving SRs on transfer.
- Upgradation under MACP scheme.
- Dealing with grievances of employees, through trade unions etc., Various Inspection Notes.
- Medical decategorisation, creation of supernumerary posts.
- Remarks for PNM at Divisional/HQ level.
- RTI Act – offering Remarks, supplying documents (Copies) to SWI/RTI.
- Certifying service details of employees on the applications to be submitted for admission to Kendriya Vidyalayas.

2.11.2 Bill Section:

- ✓ Preparation of Salary Bills & Supplementary Bills
- ✓ Withdrawal of Provident Funds – Applications.
- ✓ Bills for Cash Awards,
- ✓ Leave regularization bills.

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- ✓ Composite transfer Grants,
- ✓ Bills on arrears of DA/NDA
- ✓ Preparation of Income Tax Statement, Form 16
- ✓ Preparation of PLB.
- ✓ Preparation of Salary Bill and other Correspondences related with Gazetted Officers.
- ✓ Preparation of anticipated debits (withholding of DCRG/Non-vacation of quarters).
- ✓ Calculation of interest dues on various advances.
- ✓ Issue of salary certificates & Last Pay certificates etc.
- ✓ Maintenance of advance registers.
- ✓ Preparation of working sheets for re-fixation of pay and getting approval on supplementary bills.
- ✓ Court attachment - Recovery as per the orders of courts duly maintaining register.
- ✓ Clearance of Audit and Accounts Inspections reports and offering remarks.
- ✓ Calculation of OTA.
- ✓ Arranging Children Education Allowance.
- ✓ Redressal of staff grievances pertaining to Bill matters.
- ✓ Passing of Leave encashment.
- ✓ Recovery of damage rate of rent, Manual preparation of WCA compensation, Ex Gratia Lumpsum payment.
- ✓ Offering para-wise remarks to various court cases to Court section.
- ✓ RTI Act – Offering Remarks, supplying documents (Copies) to SWI/RTI.

Apart from the following activities is also dealing by personnel branch staff:

- Settlement for retirement staff
- Dealing of DAR cases
- Issuing of all types of Pass - Section:

- Dealing of RTI matters
- Arrange and conducting trade union PNM meetings etc.

CHAPTER – III

3.0 CRITICAL ANALYSIS

3.1 The manpower requirement of EWS/AJJ is calculated under two different heads viz., Production Shops and Servicing & Maintenance shops/sections.

3.2 Production Shops.

Blacksmith Shop	:	Shop No.602
Points & Crossings	:	Shop No.603
Fitter Shop	:	Shop No.604*
Signal Fitter Shop	:	Shop No.605*
Structural Shop	:	Shop No.606
Glued Joint Shop	:	Shop No.608
Tinker shop	:	Shop No.609**
Millwright (line side)	:	Shop No.612**
Flash Butt Welding	:	Shop No.616*** (Outsourcing)

Note:

*Production work stopped due to shortage of raw materials.

**At present production work completely stopped and closed.

***ESAB Welding Plant repair from Aug-2018 and also condemned

3.3 Servicing & Maintenance shops/sections:

Machine Shop	:	Shop No.600
Welding Shop	:	Shop No.607
Paint Shop	:	Shop No.610
Millwright Shop side	:	Shop No.612
Millwright Shop (line side)	:	Shop No.612
Loading Shop	:	Shop No.615@
Electrical shop	:	Shop No.617

@At present this shop is closed.

- 3.4 Previously, this workshop functioning of both Incentive and Non-incentive schemes. Presently, the Engineering Workshop is working as Non-Incentive scheme only. The manpower requirement in respect of Production Shops is calculated based on the Allowed Time. Normally the average Allowed time will be taken for the last financial year and the man power requirement would be decided accordingly. In this study the average allowed time for the year April – 2019 to March - 2021 is taken. The Allowed Time (AT) details were collected month wise for all Production Shops for the past two years from April - 2019 to March – 2021.

Generally, the average monthly Allowed Time is divided by the average monthly man hours of 267 for incentive scheme as prescribed in the Mechanical Code for Workshops to arrive at the requirement of Direct Workers. The Leave Reserve for the Direct Workers is worked out at the rate of 12.5%. Essentially indirect workers and indirect workers are worked out at the rate of 15% of Direct Workers including Leave Reserve.

- 3.5 ***In this case, the average monthly Allowed Time is divided by the average monthly man hours of 200 for non incentive to arrive at the requirement of Direct Workers and leave reserve is worked out at the rate of 12.5%. The allied activities such as material handling, office, store etc are considered by work study team to calculate the manpower requirement as need base.***

In addition, the work study team has also considered enhancing the manpower requirement in some shops based on the importance of the manufacturing especially for track and bridge items.

The requirement of manpower is assessed shop-wise, based on allowed time and apply need base where ever required as below.

3.6 **MACHINE SHOP (M – Shop No.600)**

3.6.1 **Staff strength at Machine Shop:**

As on March - 2021, 43 staff is working against the sanctioned staff strength of 53. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	24	24	0	0
2	Tech – I	29	6	23	0
3	Tech - II	0	0	0	0
4	Tech – III	0	13	0	13
5	Helpers	0	0	0	0
	Total	53	43	23	13

3.6.2 Work load at Machine shop:

The workload at Machine shop is broadly classified into three sections viz., (i) Drilling (ii) Lathe & Milling, (iii) Planning & Slotting Though this shop is covered under services cater to other shops of EWS/AJJ, based on the nature of work, certain activities are classified as.

- a) Drilling Section : Drill holes for Rails, Steel plates & angles
- b) Lathe Section : Surface turning of steel items.
- c) Planning Section : Planning the rails as per drawing.
- d) Tool Room : Planning & maintaining of Machine tools.
- e) Other activities : Milling, Slotting, Pressing, shearing, screwing etc.

3.6.3 Manpower requirement of Machine Shop:

The following consideration are taken for manpower calculation by the work study team as

The allowed time of planning, drilling, and slotting is allotted for machine shop of points & crossing production.

The staff deputed for requirement of drilling work of other shops like Structural, Blacksmithy etc on need base.

[

In lathe section, 10 lathes are available in which 3 in working condition. At present only Surface turning of BFR rollers is handled by lathe operation on need base

In milling section, 4 milling machines are available in which only one in working condition. At present milling work of fish plates is handled by milling operation on need base.

3 numbers of Pressing and shearing available in machine shop account and cutting/shearing works are carried out by concerned shop's staff itself.

Hence, the study team has taken the Allowed Time for manpower calculation from the monthly programme of Points & Crossing shop for planning, slotting and drilling. In other shops machine operation manpower requirement is allowed on need base.

3.6.4 Allowed Time (MHrs) of Machine shop from April-2019 to Mar-2021:

Sl.No	Month & Year	Drilling	Slotting	Planning	Total
1	Apr-19	1027.14	212.72	2024.71	3264.57
2	May-19	750.85	160.04	1486.57	2397.46
3	Jun-19	876.70	186.88	1741.82	2805.40
4	July-19	885.52	266.40	2311.18	3463.10
5	Aug-19	820.92	210.72	1961.67	2993.31
6	Sep-19	865.29	237.56	2115.89	3218.74
7	Oct-19	793.07	237.56	1928.50	2959.13
8	Nov-19	918.52	210.72	1683.48	2812.72
9	Dec-19	612.07	106.36	1488.12	2206.55
10	Jan-20	867.05	160.04	1614.56	2641.65
11	Feb-20	854.14	133.20	1640.88	2628.22
12	Mar-20	882.37	160.04	1661.32	2703.73
13	#Sep-20	874.03	185.88	1822.67	2882.58
14	Oct-20	817.62	186.88	1658.38	2662.88
	Total	11845.29	2655.00	25139.75	39640.04
	Avg/month	846.09	189.64	1795.70	2831.43
15	*Nov-20	0	185.88	1678.46	1864.34
16	Dec-20	0	160.04	1540.49	1700.53
17	Jan-21	0	106.36	938.99	1045.35
18	Feb-21	0	239.56	1895.90	2135.46
19	Mar-21	0	186.88	1695.77	1882.65

#April-20 to Aug-20 production work is stopped due to Covid-19.

*No drilling man hours available in the programmed statement from Nov-2020 to Mar-2021, so the work study team has considered the manpower requirement based on the 14 months average of programmed man hours for drilling, slotting and planning machines.

The required man power for Machine shop is calculated as below.

Average Allowed Time per month	:	2831.43
No of direct Workers required (2832/200)	:	14.16
Say as	:	14

3.6.5 **Staff for Allied activities as need base:**

Lathe operators	:	2
Milling operators	:	2
Screwing operator	:	1
Drilling operators (one in each F, BS & R shop)	:	3
CNC End Milling Machine at R shop	:	2
Material Handling & Scrap removal at M & E Shops:	:	2
Tool Room (Incl. Planning tools) & Office	:	2
Sub total	:	28
LR at 12.5% (3.5 say as 4)	:	4
Total	:	32

Hence, the study team has allowed 32 staff for Machine Shop.

3.6.6 **Sanction Vs Requirement:**

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	24	24	24	0
Tech - I	29	6	8	21
Tech - II	0	0	0	0
Tech - III	0	13	0	0
Total	53	43	32	21

Therefore, 21 vacant posts may be recommended for surrender and the excess 11 (43-32) staff in Tech-III is available against the actual

and the same can be deputed for needy places especial in production shop of EWS/AJJ.

3.6.7 Recommendation No.1

23 vacant posts of Tech-I in GP Rs. 2800/- are found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank
(Total-21 posts)

3.7 BLACKSMITHY SHOP (No.602)

3.7.1 Staff strength details at Black smithy shop:

As on March - 2021, 27 staff is working against the sanctioned staff strength of 36. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	18	17	1	0
2	Tech – I	18	7	11	0
3	Tech - II	0	0	0	0
4	Tech – III	0	3	0	3
5	Helpers	0	0	0	0
	Total	36	27	12	3

3.7.2 Manufacturing items at Black Smithy shop:

The workload at Black Smithy Shop is broadly dealt with items of manufacturing as below.

Joggled fish plate (52 & 60 kg) with C-clamps, Buffer Stop, New Skid, Fittings for curved switches (gauge tie plates, stretcher bar with bracket), Locking bolt with chain link, bend fish plates for 52 & 60 Kg, etc.

Lifting barrier components, gauge tie plate, stretcher bar with bracket for Points & Crossings shop, Shoulder plate and lug for slide chair, push trolley and motor trolley components and components for open web girders.

3.7.3 **Machines and equipments available at Blacksmithy Shop**

Air blower	:	5
Band Saw cutting machine	:	1
Drilling machine	:	1
Electrical girding machine	:	1
EOT Crane	:	1 (Repair for long period)
Oil fire Furnace	:	4
Power Hammer	:	3 (20 CWT-1, 15 CWT-1, 10 CWT-1).
Power Press	:	1 (500 Ton capacity)

3.7.4 **Staff distribution for the year April-2019 to March – 2020:**

Mon & Year	BS Shop	RE Staff	Total Available staff of E-Shop	Staff Send to other Shop	LR at 12.5 %	Staff for Allied works	Staff Prog. for Production
	a	b	c=(a+b)	d	e	f	g=(c-d-e-f)
Apr-19	33	3	36	8	4	11	13
May-19	33	3	8	6	4	12	14
June-19	32	5	37	6	4	12	15
July-19	31	5	36	6	4	11	15
Aug-19	30	6	36	6	4	11	15
Sep-19	30	6	36	6	4	11	15
Oct-19	30	6	36	6	4	11	15
Nov-19	30	7	37	6	4	11	16
Dec-19	30	0	30	6	3	11	10
Jan-20	30	0	30	8	3	9	10
Feb-20	29	0	29	8	3	8	10
Mar-20	29	0	29	8	3	9	9
#Sep-20	26	0	26	8	2	2	14
Oct-20	26	0	26	8	2	8	8
Nov-20	26	0	26	8	2	9	7
Dec-20	26	0	26	8	2	9	7
Jan-21	25	0	25	7	2	8	8
Feb-21	24	0	24	4	3	4	13
Mar-21	23	0	23	4	3	4	12

Apr-20 to Aug-20 there is no production work due to COVID-19.

RE – Re-engagement staff

Staff sent to other shops: FBW, E & R shop etc.

Allied Works:

The following are the allied activities doing along with the direct workers in the monthly programmed statement of Points & Crossing Shop.

- Office
- Store
- Die section
- Material Feeding and handling

From the above table, the staff of allied works is more than 80% of the staff programmed for production works. Normally, the EIW and IW staff requirement is 10 to 15% of the direct workers in incentive scheme. However the study team has allowed for allied works duly considering the production works involved in the direct workers on need base.

3.7.5 Month wise Programmed AT & Production details of Black Smithy Shop from April – 2019 to March – 2021:

Sl.No	Month & Year	Staff Prog for Production	Allowed Time in Man hours	Production details	
				Programmed (MT)	Achieved (MT)
For the Year April-2019 to March-2021					
1	April – 19	13	2467	14.594	14.956
2	May – 19	14	2065	12.102	12.154
3	June – 19	15	2987	21.962	21.922
4	July – 19	15	3105	21.006	20.962
5	Aug – 19	15	2924	19.894	19.872
6	Sep - 19	15	3228	26.256	26.282
7	Oct – 19	15	2977	24.576	24.656
8	Nov – 19	16	3244	15.452	12.377
9	Dec – 19	10	2081	9.002	12.852
10	Jan – 20	10	1948	8.304	8.088
11	Feb – 20	10	2072	13.054	13.054
12	Mar – 20	9	1787	10.120	10.120
13	#Sep-20	14	2622	15.704	11.822

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14	Oct-20	8	1626	11.412	9.940
15	Nov-20	7	1392	9.404	9.372
16	Dec-20	7	1445	9.504	9.652
17	Jan-21	8	1357	6.524	6.984
18	Feb-21	13	2463	9.124	9.274
19	Mar-21	12	2573	9.359	9.107
	Total	226	44363	267.353	263.446
	Avg/19 Months	11.89	2334.89	14.07	13.87
			Out turn Achieved in %		98.58

#April-20 to Aug-20 production work is stopped due to Covid-19.

From the above table it is observed that, the out turn achieved is 98.58% against the programmed out turn. The reason for less out turn is due to machine/power failures.

The required man power for BS shop is calculated as below.

Average AT/Month (for 19 months) : 2335
 No of direct Workers required (2335/200) : 11.68
 Say as : 12

3.7.6 **Staff for Allied activities as need base:**

Material handling : 5
 Die section : 2
 Assist Drilling M/c operator & Welder : 1
 Marker : 1
 Office & Store : 1
Sub total : 22
 LR at 12.5% (2.75 say 3) : 3
Total : 25

Hence, the study team has allowed 25 staff for Black Smithy Shop.

3.7.6 **Sanction Vs Requirement:**

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	18	16	18	0
Tech - I	18	8	7	11

Tech - II	0	0	0	0
Tech - III	0	0	0	0
Total	36	24	25	11

3.7.7 Recommendation No.2

11 posts of Tech – I in grade pay Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank
(Total-11 posts)

3.8 POINTS AND CROSSINGS SHOP (No.603)

3.8.1 Staff strength details at Points & Crossing shop:

As on March - 2021, 39 staff is working against the sanctioned staff strength of 71. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	20	19	1	0
2	Tech – I	40	6	34	0
3	Tech - II	5	2	3	0
4	Tech – III	6	12	0	6
5	Helpers	0	0	0	0
	Total	71	39	38	6

3.8.2 Manufacturing items at Points & Crossing shop:

This shop caters to the need of items like various types of track Turn outs, Switch Expansion Joints (SEJ), Modified SEJ, acute & obtuse crossing, etc., to the open line and construction unit of Civil Engineering Department. The following are the items manufactured in Points & Crossings Shop.

- Curved switches for fan shaped layout 60 kg(1 in 16, 1 in 12, & 1 in 8 ½).
- SEJ for PSC lay out and improved SEJs.
- Standard crossings, 52 Kg (1 in 8 1/2, 1 in 12, 1 in 16) and 60 Kg (1 in 8 ½ & 1 in 12).
- Special crossings 1 in 6.

- Diamond Crossings 1 in 4 ¼, 1 in 10, 1 in 2 ½ and 1 in 8 ½.
- Rack bars for N.M. Railways.(Rare item)

At present, the manufacturing of Curved switches of 52 Kg and 60 Kg of 1 in 8.5 & 1 in 12 and their related items, check rails of 52 Kg/60 Kg and cutting and drilling of rails for glued joint manufacturing.

3.8.3 Staff distribution for the year April-2019 to March – 2020:

Mon & Year	E Shop	RE Staff	Staff from other Shops	Total Available staff of E-Shop	Staff Send to other Shop	LR at 12.5%	Staff for Allied works	Staff Prog. for Production
	A	b	c	d=(a+b+c)	e	f	g	h=(d-e-f-g)
Apr-19	45	12	14	71	4	-	32	35*
May-19	44	12	14	70	4	-	32	34
Jun-19	39	12	14	65	4	-	30	31
July-19	36	12	16	64	4	-	27	33
Aug-19	36	12	16	64	2	-	29	33
Sep-19	35	12	17	64	2	-	29	33
Oct-19	35	12	17	64	2	-	29	33
Nov-19	34	17	17	68	2	-	32	34
Dec-19	32	-	16	48	-	-	24	24
Jan-20	32	-	18	50	1	-	23	26
Feb-20	31	-	23	54	1	-	26	27
Mar-20	32	-	18	50	1	-	23	26
#Sep-20	29	-	20	49	1	4	15	29
Oct-20	29	-	17	46	1	4	17	24
Nov-20	29	-	17	46	1	4	17	24
Dec-20	30	-	17	47	1	4	19	23
Jan-21	30	-	16	46	1	3	22	20
Feb-21	30	-	24	54	1	5	19	29
Mar-21	40	-	7	47	-	5	9	33

* From Apr-2019 to March-2020 the LR is included in the monthly staff programmed for production.

Apr-20 to Aug-20 there is no production work done properly due to COVID-19.

RE – Re-engagement staff

Staff from other Shops: D shop, SD shop, BS shop, M shop & EOT crane drivers.

Staff sent to other shops: R shop & MW shop etc.

Allied Works:

The following are the allied activities doing along with the direct workers in the monthly programmed statement of Points & Crossing Shop.

- Office
- Store
- Marker
- Dy.CE Office
- Feeding and handling
- Flat/tie plate marking
- Scrap removal from Planning M/cs
- EOT Crane drivers
- Retirement staff

From the above table, the staff of allied works is the most of the months as 90% of the staff programmed for production works. Normally, the EIW and IW staff requirement is 10 to 15% of the direct workers in incentive scheme. However the study team has allowed for allied works duly considering the production works involved into the direct workers on need base.

3.8.4 Month wise Programmed AT & Production details of Points and Crossing shop from April - 2019 to March – 2021:

Sl.No	Month & Year	Staff Prog for Production	Allowed Time in Man hours	Production details	
				Prog (MT)	Achieved (MT)
For the Year April-2019 to March-2021					
1	April - 19	35	6759	77.496	78.076
2	May - 19	34	4929	58.399	60.531
3	June - 19	31	5813	68.885	72.539
4	July - 19	33	6618	74.181	74.312
5	Aug - 19	33	6353	70.842	70.921
6	Sep - 19	33	6566	73.810	73.839
7	Oct - 19	33	6344	65.323	69.806

31

8	Nov - 19	34	6647	70.286	71.117
9	Dec - 19	24	4767	55.967	58.079
10	Jan - 20	26	5243	62.671	64.877
11	Feb - 20	27	5299	66.560	68.629
12	Mar - 20	26	5150	63.301	65.742
13	#Sep -20	29	5487	68.640	60.868
14	Oct - 20	24	4884	59.594	45.114
15	Nov - 20	24	4782	74.606	56.795
16	Dec - 20	23	4789	64.154	67.436
17	Jan - 21	20	3397	43.643	50.487
18	Feb - 21	29	5509	69.096	69.303
19	Mar - 21	33	7166	71.537	72.464
	Total	551	106502	1258.991	1250.935
	Avg/Mon	29	5605.37	66.263	65.839
				Achieved in %	99.36

Apr-20 to Aug-20 there is no production work done properly due to COVID-19.

The required man power for Points & Crossing shop is calculated as below.

Average AT/Month (106502/19) : 5606

No of direct Workers required (5606/200) : 28.03

Say as : 29

The following staff for allied works has considered for production along with direct works on need base.

Office/Store : 1

Markers for Rails cutting, bending,

After machining etc : 3

Material unloading, handling, feeding
to machines, staging finished items, scrap
collection, staging for gas cutting,

32

De-burr etc	:	6
Sub total	:	39
LR at 12.5% (4.8 say 5)	:	5
Total	:	44

From the above table it is observed that, the out turn achieved is almost nearly 100 % (99.36) against the programmed out turn.

Hence, the study team has allowed 44 staff for Points & Crossing shop.

3.8.5 Sanction Vs Requirement:

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	20	19	20	0
Tech - I	40	6	13	27
Tech - II	5	2	5	0
Tech - III	6	12	6	0
Total	71	39	44	27

3.8.6 Recommendation No.3

27 vacant posts of Tech – I in grade pay Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank

(Total-27 posts)

3.9 FITTER SHOP (No.604):

3.9.1 Staff strength details at Fitter shop:

As on March - 2021, 13 staff is working against the sanctioned staff strength of 14. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	10	9	1	0
2	Tech – I	4	1	3	0
3	Tech - II	0	0	0	0
4	Tech – III	0	3	0	3
5	Helpers	0	0	0	0
	Total	14	13	4	3

3.9.2 Work load at Fitter Shop:

Fitter Shop manufactures items like, Push Trolleys, modified rail dollies, point screw clamps, steel sleepers for N.M. Rlys. Manufacture & repairs of four tier and five tier arrangements for BRN wagons, special gauges for Permanent Way Inspectors, spares for Track machines, Tie tampers, Ballast cleaning machines, wagon door long cotters, short cotters, steel channel sleepers for bridges, ladder trolley for OHE, spring setting device, Hand cart for IOW & Health Unit, etc. **The production work has temporarily suspended from Jan-2020 due to shortage of raw materials. The staff has been deputed to work other shop.**

3.9.3 **The machines and equipments at Fitter shop:**

Band saw cutting machine	:	2
Drilling machine	:	4
End graving machine	:	2
End grinding machine	:	1
Electric hoist	:	1
Swing Grinding machine	:	1

3.10 **Signal Fitter Shop (No.605):**

3.10.1 **Staff strength details at Signal Fitter shop:**

As on March - 2021, 9 staff is working against the sanctioned staff strength of 16. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	10	9	1	0
2	Tech – I	6	0	6	0
3	Tech - II	0	0	0	0
4	Tech – III	0	0	0	0
5	Helpers	0	0	0	0
	Total	16	9	7	0

3.10.2 **Work load at Signal Fitter Shop:**

This shop was manufactured the following items as under:

- Lifting Barrier Gate

- Winches for L.B. gates.
- Four tier & five tier arrangements for BRN wagon.
- Bulk head doors.

3.10.3 **Machines and equipments at Signal Fitter Shop:**

Band Saw Machines	:	1
Drilling machines	:	3
End grinding machine	:	1

3.10.4 ***The production work has temporarily suspended from Jan-2020 due to shortage of raw materials. The staff has been deputed to work other shop.***

However the work study team has calculated the requirement of manpower based on the programmed allowed time from April-2019 to Dec-20. (For 9 months)

3.10.5 **Month wise Programmed AT & Production details of Fitter & Signal Fitter shop from April - 2019 to Dec – 2019:**

Sl.No	Month & Year	Staff Prog for Production	Allowed Time in Man hours	Production details	
				Prog (MT)	Achieved (MT)
For the Year April-2019 to Dec-2019					
1	April - 19	12	2314	7.750	7.450
2	May - 19	10	1478	5.350	5.950
3	June - 19	10	1964	6.780	6.650
4	July - 19	10	2072	8.280	7.880
5	Aug - 19	10	1950	7.450	8.260
6	Sep - 19	11	2145	7.740	8.330
7	Oct - 19	11	2184	8.240	7.700
8	Nov - 19	10	2035	8.090	7.550
9	Dec - 19	8	1656	6.240	6.550
	Total	92	17798	65.92	66.32
	Avg/Mon	10.22	1977.55	7.324	7.369
			Achieved in %		100.61

From the above table it is observed that, the out turn achieved is more than 100 % (100.61) against the programmed out turn.

The required man power for Fitter & Signal Fitter shop is calculated as below.

Average AT/Month (17798/9) : 1978

No of direct Workers required (1978/200) : 9.89

Say as : 10

The following staff for allied works has considered for production along with direct works on need base.

Office/Store : 2

Sub total : 12

LR at 12.5% (1.5 say 2) : 2

Total : 14

Hence, the study team has allowed 14 staff for Fitter and Signal Fitter shop.

3.10.6 Sanction Vs Requirement:

Shop	Category	Sanction	Actual	Requirement	Surplus
Fitter	Sr.Tech	10	9	9	1
	Tech-I	4	1	1	3
	Tech-II	0	0	0	0
	Tech-III	0	3	0	0
	Total-A	14	13	10	4
Signal Fitter	Sr.Tech	10	9	4	6
	Tech-I	6	0	0	6
	Tech-II	0	0	0	0
	Tech-III	0	0	0	0
	Total-B	16	9	4	12
	Total (A+B)	30	22	14	16

Therefore, 16 posts may be recommended for surrender and the excess 8 (22-14) staff in Tech-III -3 and Sr.Tech - 5 are available against the actual and the same can be deputed for needy places especial in production shop of EWS/AJJ.

Further the actual 22 staff may be deputed to needy places of EWS/AJJ, till the future requirement arises.

3.10.5 Recommendation No.4

C) One vacant post of Sr.Tech in GP Rs. 4200/- and 3 Posts of Tech.Gr.I in GP Rs. 2800/- are found excess to the requirement in Fitter Shop and the same may be surrendered and credited to the Vacancy Bank.
(Total – 4 posts)

D) 6 post of Sr.Tech in GP Rs. 4200/- and 6 Posts of Tech.Gr.I in GP Rs. 2800/- are found excess to the requirement in Signal Fitter Shop and the same may be surrendered and credited to the Vacancy Bank.
(Total -12 posts)

(Net Total-16 posts)

3.11 Structural Shop (No.606):

3.11.1 Staff strength details at Structural Shop:

As on March - 2021, 39 staff is working against the sanctioned staff strength of 88. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	24	22	2	0
2	Tech – I	48	1	47	0
3	Tech - II	8	0	8	0
4	Tech – III	8	16	0	8
5	Helpers	0	0	0	0
	Total	88	39	57	8

3.11.2 Work load at Structural Shop:

This Shop manufactures various types of Girders like Riveted open Web Girder, Riveted Shallow type girders, welded girders, temporary girders, platform shelters and Foot over Bridges and caters to the need of the entire Railways.

At present, welded type girders, jigs & templates are manufacturing only. Light structural works like platform shelter and foot over bridges are already transferred and manufactured to T&P/GOC unit.

3.11.3 Machines and equipments at Structural Shop:

Template Shed	:	1 (size: 45m x 13m)
Air compressor	:	3
Bevelling Machine	:	1
Drilling Machine	:	7
Electrical Grinding Machine	:	1
Electrical Hoist	:	1
CNC End Milling Machine	:	1
E.O.T	:	5
Punching & Shearing Machine	:	1
Pressing Machine	:	1
Plate straightening Machine	:	1
Warp Removal Machine	:	1
Generator	:	1 (250 KVA)

3.11.4 Staff distribution for the year April-2019 to March - 2021:

Mon & Year	R Shop	RE Staff	Staff from other Shops	Total Available staff of E-Shop	Staff Send to other Shop	Staff for Allied works	LR at 12.5%	Staff Prog. for Production
	A	b	C	d=(a+b+c)	e	f	g	h=(d-e-f-g)
Apr-19	35	12	9	56	3	16	5	32
May-19	34	15	7	56	3	15	5	33
Jun-19	32	8	7	47	2	14	4	27
July-19	31	8	7	46	2	14	4	26
Aug-19	31	8	4	43	2	13	4	24
Sep-19	31	8	3	42	2	13	3	24
Oct-19	30	8	3	41	2	13	3	23
Nov-19	30	14	3	47	2	13	4	28
Dec-19	30	-	3	33	2	10	3	18
Jan-20	29	-	3	32	2	9	3	18
Feb-20	29	-	14	43	2	10	4	27
Mar-20	28	-	14	42	2	10	4	26
#Sep-20	25	-	18	43	2	5	5	31

Oct-20	25	-	17	42	2	10	4	26
Nov-20	24	-	16	40	2	10	4	24
Dec-20	23	-	16	39	2	10	4	23
Jan-21	23	-	16	39	2	10	4	23
Feb-21	23	-	35	58	3	12	6	37
Mar-21	42*	-	13	55	2	11	6	36

*19 staff in Tech – III has posted in R shop.

Apr-20 to Aug-20 there is no production work done properly due to COVID-19.

RE – Re-engagement staff

Staff from other Shops: staff deputed from D shop, SD shop, GJ shop, M shop MW shop etc for work at structural shop.

Staff sent to other shops: Inspection, Laboratory & GJ shop etc.

Allied Works:

The following are the allied activities doing along with the direct workers in the monthly programmed statement of Points & Crossing Shop.

- Office
- Store
- Template Marking
- Material Feeding and handling

From the above table, the staff of allied works is more or less 40 to 50% of the staff programmed for production works. Normally, the EIW and IW staff requirement is 10 to 15% of the direct workers in incentive scheme. However the study team has allowed the necessity of allied works duly considering the production works involved in the direct workers on need base.

3.11.5 Month wise Programmed AT & Production details of Structural shop from April - 2019 to March – 2021:

Sl.No	Month & Year	Staff Prog for Production	Allowed Time in Mhrs	Production details		
				Prog (MT)	Achieved (MT)	By Contract (MT)

39

For the Year April-2019 to March-2020						
1	April -19	32	6210	42.500	39.510	55.100
2	May -19	33	4950	31.500	30.000	10.000
3	June -19	27	5400	32.000	30.000	15.000
4	July -19	26	5400	32.000	28.971	15.000
5	Aug -19	24	4770	28.500	26.130	15.000
6	Sep - 19	24	5094	28.300	27.200	20.000
7	Oct -19	23	4500	25.000	25.000	25.000
8	Nov - 19	28	5670	31.500	30.000	25.000
9	Dec - 19	18	3780	21.000	21.000	30.000
10	Jan - 20	18	3600	20.000	25.000	45.000
11	Feb - 20	27	5616	31.200	31.200	115.000
12	Mar - 20	26	5202	28.900	31.500	115.000
13	#Sep-20	31	5877	33.000	17.000	-
14	Oct - 20	26	5362	30.000	26.000	-
15	Nov - 20	24	4760	26.500	29.000	-
16	Dec - 20	23	4765	26.530	28.130	-
17	Jan - 21	23	3906	21.700	22.000	-
18	Feb - 21	37	7020	39.000	29.500	-
19	Mar - 21	36	7740	43.000	35.000	-
	Total	506	99622	572.13	532.141	
	Avg/Month	26.63	5243.26	30.112	28.007	
			Achieved in %		93.01	

Apr-20 to Aug-20 there is no production work done properly due to COVID-19 and also contract works has completed on March – 2020.

The required man power for Structural Shop is calculated as below.

Average AT/Month (99622/19) : 5243

No of direct Workers required (5243/200) : 26.22

Say as : 27

Templates & Material handling : 6

One staff to Assist SSE/Insp : 1

Office, Store & Laboratory : 2

40

Sub total	:	36
LR at 12.5% (4.5 say 5)	:	5
Total	:	41

Hence, the study team has allowed as 41 staff for Structural Shop.

Further the extension work of two bays of size 146.6m x 36.6m is under progress by construction unit.

3.11.6 Sanction Vs Requirement:

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	24	22	22	2
Tech - I	48	1	11	37
Tech - II	8	0	4	4
Tech - III	8	16	4	4
Total	88	39	41	47

3.11.7 Recommendation No.5

The following posts are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

- 2 posts of Sr.Tech in GP Rs. 4200/-,
- 37 posts of Tech – I in GP Rs. 2800/-,
- 4 Posts of Tech – II in GP Rs.2400/- and
- 4 posts of Tech – III in GP Rs. 1900/-

(Total - 47 posts)

3.12 Welding Shop (No.607):

3.12.1 Staff strength details at Welding Shop:

As on March - 2021, 43 staff is working against the sanctioned staff strength of 60. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	19	19	0	0
2	Tech – I	37	4	33	0
3	Tech - II	4	0	4	0
4	Tech – III	0	20	0	20

41

5	Helpers	0	0	0	0
	Total	60	43	37	20

3.12.2 Work load at Welding Shop:

The Welding Shop caters to the need of all Gas cutting & Welding works in EWS/AJJ. The staff distributions to black smithy, fitter & signal fitter, points & crossing and structural shops are based on the programme issued by them every month from April-2019 to March-2021.(for 19 months)

Further, the production work of Fitter & Signal fitter shop has temporarily suspended from Jan-2020 due to shortage of raw materials. The staff has been deputed to work other shop.

However the work study team has calculated the requirement of manpower of welding shop separately based on the programmed allowed time for gas cutting and welding of Fitter & Signal Fitter shop from April-2019 to Dec-20. (For 9 months)

3.12.3 Staff distribution and Month wise Programmed Mhrs details for the year April-2019 to March - 2021:

Mon & Year	Shop	Staff Details				Mhrs Details	
		Pug	Gas cut	Welder	Total	Pug & Gas cut	Welder
Apr-19	BS	0	2	0	2	263.50	18.00
	E	0	2	3	5	309.04	1030.5
	R	2	2	8	12	206.00	736.00
May-19	BS	0	2	1	3	233.5	93.00
	E	0	2	3	5	255.88	768.75
	R	2	2	8	12	153.00	546.00
Jun-19	BS	0	2	0	2	205.5	93.00
	E	0	2	3	5	304.76	845.25
	R	2	2	8	12	155.00	554.00
July-19	BS	0	2	0	2	205.50	75.00
	E	0	2	3	5	304.24	901.30
	R	2	2	8	12	155.00	554.00
Aug-19	BS	0	2	0	2	205.50	75.00
	E	0	2	3	5	261.40	1044.25
	R	2	2	8	12	138.00	494.00

42

Sep-19	BS	0	2	0	2	205.50	75.00
	E	0	2	3	5	267.44	1016.90
	R	2	2	8	12	137.00	490.00
Oct-19	BS	0	2	0	2	167.50	75.00
	E	0	2	3	5	267.44	1016.90
	R	2	2	8	12	121.00	433.00
Nov-19	BS	0	2	0	2	125.50	75.00
	E	0	2	3	5	313.64	1154.35
	R	2	2	8	12	153.00	546.00
Dec-19	BS	0	2	0	2	39.50	0.00
	E	0	2	3	5	195.16	752.25
	R	2	2	8	12	102.00	364.00
Jan-20	BS	0	2	0	2	39.50	0.00
	E	0	2	3	5	160.76	646.25
	R	2	2	8	12	97.00	346.00
Feb-20	BS	0	2	0	2	39.50	0.00
	E	0	2	3	5	161.60	599.00
	R	2	2	8	12	151.00	540.00
Mar-20	BS	0	1	1	2	60.50	48.00
	E	0	2	3	5	149.44	597.80
	R	2	2	8	12	92.00	327.00
#Sep-20	BS	0	1	1	2	165.00	2.80
	E	0	2	3	5	119.08	482.75
	R	1	1	3	5	121.00	433.00
Oct-20	BS	0	1	1	2	61.25	7.50
	E	0	2	3	5	128.64	489.60
	R	1	1	3	5	121.00	433.00
Nov-20	BS	0	1	1	2	51.25	2.50
	E	0	2	3	5	176.56	589.50
	R	1	1	3	5	121.00	433.00
Dec-20	BS	0	1	1	2	56.25	5.00
	E	0	2	3	5	70.48	513.00
	R	1	1	3	5	121.00	433.00
Jan-21	BS	0	1	1	2	57.65	0.00
	E	0	2	3	5	125.93	477.00
	R	1	1	3	5	121.00	433.00
Feb-21	BS	0	1	1	2	138.00	96.50
	E	0	2	3	5	216.34	684.00
	R	1	1	3	5	189.00	675.00
Mar-21	BS	0	2	1	3	348.00	99.50
	E	0	2	3	5	220.72	751.50
	R	1	1	4	6	209.00	745.00
Total		31	100	184	315	9339.95	24716.65
AVG/Month(19)		1.63	5.26	9.68	16.57	491.58	1300.88

BS – Black Smithy Shop, **E** – Points & Crossing Shop and **R** – Structural Shop

Apr-20 to Aug-20 there is no production work done properly due to COVID-19.

3.12.4 **Staff distribution and Month wise Programmed Mhrs details of Fitter & Signal Fitter shop for the year April-2019 to Dec - 2019:**

Month & Year	Staff Details			Mhrs Details	
	Gas Cutter	Welder	Total	Gas Cut	Welding
Apr-19	2	4	6	193.05	381.00
May-19	2	4	6	128.70	254.00
Jun-19	2	4	6	69.32	254.00
July-19	2	4	6	211.05	405.00
Aug-19	2	4	6	216.55	484.00
Sep-19	2	4	6	236.55	556.50
Oct-19	2	4	6	216.55	484.00
Nov-19	2	4	6	213.55	458.50
Dec-19	2	4	6	151.70	320.50
Total	18	36	54	1637.02	3597.5
Avg/Month (9)	2	4	6	181.89	399.72

From the above two tables, the required man power calculation is based on Man Hours programmed for Welding Shop as below.

Average Allowed Time per month,

For pug & hand Gas cutting activities (BS, E & R shop): 492

For Welding activities (BS, E & R shop) : 1301

For gas cutting activities at D & SD shop : 182

For Welding activities at D & SD shop : 400

Total allowed time for both Gas cut & Weld : 2375

No of direct Workers required (2375/200) : 11.87

Say as : 12

Staff assisting to gas cutter/welder as need base : 6

Gas cutter/Welder for BFR, MW shop, FBW, etc : 6

Collection of gas cylinders/repair works to
 Welding Equipments/Store/Office } : 4

Sub total : 28

LR at 12.5% (3.5 say 4) : 4

Total : 32

3.12.5 Sanction Vs Requirement:

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	19	19	19	0
Tech - I	37	4	10	27
Tech - II	4	0	3	1
Tech - III	0	20	0	0
Total	60	43	32	28

Therefore, 28 posts may be recommended for surrender and the excess 11 (43-32) staff is available against the actual and the same can be utilized in the place of vacant posts to other shops of EWS/AJJ on the basis of the multi skilled working.

3.12.6 Recommendation No.6

27 posts of Tech – I in GP Rs. 2800/- and one post of Tech – I in GP Rs.2400/- are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

(Total - 28 posts)

3.13 Glued Joint Shop (No. 608):

3.13.1 Staff strength details at Glued Joint Shop (Both GJ/WW & GJ/C):

As on March - 2021, 22 staff is working against the sanctioned staff strength of 32. The grade wise artisan staff detail is tabulated below.

GJ Shop	Category	Sanction	Actual	Vacant	Excess
GJ/WW	Sr.Tech	4	4	0	0
	Tech – I	8	6	2	0
	Tech – II	1	1	0	0
	Tech – III	1	0	1	0
GJ/C	Sr.Tech	5	2	3	0
	Tech – I	10	2	8	0
	Tech – II	2	1	1	0
	Tech – III	1	6	0	5
	Total	32	22	15	5
	Helper	0	1	0	1

3.13.2 Work load at Glued Joint Shop:

Manufacturing of 52/60 Kg G3 (L) glued joints of 6.5 metre long, for the purpose of automatic block signaling of the train operation.

At present 4 Glued Joints are produced an average per day for single batch consists of 24 staff for arranging feeding of rails, insulation sleeves, liners, fish plates, end post, mixing of glues etc. But in two batches consist of 31 staff to be produced 8 glued joints per day. Currently, the sand blasting operation is outsourced.

3.13.3 The details of machinery and equipments available are

Air compressor 300 CFM	-	2
Electrical hoist	-	3
FRET SAW grinding machine	-	1
Jig Saw Machine	-	1
Guillotine Shearing Machine	-	1
Pressing Machine	-	1
Sand Blast Equipment	-	1

3.13.4 Distribution of Staff

Sl.No	Works description	Single batch	For two batches
1	Feeding of rails, checking of holes for correctness, letter grinding and hoist operation	6	7
2	Assembly of glued joints	5	10
3	End post moulding	1	1
4	End post cutting	1	1
5	Bolt moulding	1	1
6	Liner moulding, cutting & punching	2	3
7	Holes chamfering	2	2
8	Cloth cutting, S.I test, Pull out test, joint loading and other jig works.	3	3
9	Office and store	2	2
10	Shop floor cleaning	1	1
	Total	24	31

3.13.5 Staff strength Vs Out turn details:

Mon & Year	GJ Staff	RE Staff	Staff from other Shops	Total Staff at GJ Shop	Staff Sent to other Shops	Staff for Allied works	LR at 12.5%	Staff Prog for Production
Apr-19	33	5	-	38	5	2	5	26
May-19	33	5	-	38	-	2	5	31
Jun-19	33	5	-	38	-	2	5	31
July-19	33	5	-	38	5	2	5	26
Aug-19	32	5	-	37	5	2	5	25
Sep-19	32	5	-	37	5	2	5	25
Oct-19	32	5	-	37	5	2	5	25
Nov-19	33	5	-	38	-	2	5	31
Dec-19	33	-	-	3	-	2	4	27
Jan-20	23	-	16	39	11	2	4	22
Feb-20	23	-	16	39	11	2	4	22
Mar-20	23	-	16	39	11	2	4	22
#Sep-20	15	-	10	25	-	2	3	20
Oct-20	15	-	10	25	-	2	3	20
Nov-20	13	-	13	26	-	2	3	21
Dec-20	13	-	13	26	-	2	3	21
Jan-21	13	-	13	26	-	2	3	21
Feb-21	13	-	19	32	-	2	4	26
Mar-21	18	-	13	31	-	2	4	25

Apr-20 to Aug-20 there is no production work done properly due to COVID-19.

RE – Re-engagement staff

Staff from other Shops: Staff deputed from Tinker shop, D & SD Shop, M Shop etc for work at Glued Joint shop.

Staff sent to other shops: E Shop, M Shop, R shop, Welding Shop, FBW WM office, Time office etc.

Allied Works:

The following are the allied activities doing along with the direct workers in the monthly programmed statement of GJ Shop.

- Office
- Store
- LR Staff

3.13.6 Month wise Programmed AT & Production details of GJ Shop from April - 2019 to Mar - 2021:

Sl.No	Month & Year	Staff Prog for Production	Production details	
			Prog (MT)	Achieved (MT)
1	April - 19	26	58.020	60.230
2	May - 19	31	46.410	43.380
3	June - 19	31	43.750	46.140
4	July - 19	26	31.968	25.97
5	Aug - 19	25	29.970	29.970
6	Sep - 19	25	33.300	33.970
7	Oct - 19	25	26.860	30.370
8	Nov - 19	31	58.750	59.120
9	Dec - 19	27	34.375	44.800
10	Jan - 20	22	56.250	53.950
11	Feb - 20	22	60.164	59.900
12	Mar - 20	22	57.582	55.614
13	#Sep -20	20	58.608	58.530
14	Oct - 20	20	62.604	39.96
15	Nov - 20	21	61.272	61.270
16	Dec - 20	21	63.936	63.940
17	Jan - 21	21	51.948	51.950
18	Feb - 21	26	57.942	58.61
19	Mar - 21	25	66.600	66.600
	Total	467	960.309	944.274
	Avg/Mon	24.58	50.54	49.70
			Achieved in %	98.34

From the above table it is observed that, the achieved out turn is 98.34% against the programmed out turn. The less out turn happened due to machines/power failure etc.

The required man power for GJ Shop is based on the average staff per month utilization against the average per month programmed on need base below.

Average Staff/Month (467/19)	:	24.58
Say as	:	25
Office & Store on need base	:	2
Sub total	:	27
LR at 12.5% (3.4 say 4)	:	4
Total	:	31

Therefore these 31 staff can be continued on need base for two batches are found satisfactory to produce at the rate of 8 Glued Joints (for 52 Kg or 60 Kg rails) per day. Hence the study team has allowed 31 staff for the present system of deployment of staff at Glued Joint production work.

Further the actual strength of GJ section is 23 (both GJ/WW & GJ/C) as on 01.04.2021. The additional staff is met out from sister shops.

Hence, the study team has allowed as 31 staff for GJ Shop.

3.13.7 Sanction Vs Requirement:

GJ Shop	Category	Sanction	Actual	Requirement	Surplus
GJ/WW	Sr.Tech	4	4	4	0
	Tech – I	8	6	8	0
	Tech – II	1	1	1	0
	Tech – III	1	0	1	0
GJ/C	Sr.Tech	5	2	5	0
	Tech – I	10	2	9	1
	Tech – II	2	1	2	0
	Tech – III	1	6	1	0
	Helper	0	1	0	0
	Total	32	23	31	1

3.13.8 Recommendation No.7

One post of Tech – I in GP Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the vacancy bank.
(Total - 1 post)

3.14 Loading Shop (No.608):

3.14.1 Staff strength details at Loading Shop:

As on March - 2021, staff is working against the sanctioned staff strength of 5. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	1	1	0	0
2	Tech – I	2	0	2	0
3	Tech - II	0	0	0	0
4	Tech – III	0	0	0	0
5	Helpers	0	0	0	0
	Total	3	1	2	0

3.14.2 Work load at Loading shop:

The following works are carried out by Loading Shop.

- Rails received from FBW Shop are unloaded for Points and Crossings Shop.
- Placement and movement of wagons by issue of gate memos in co-ordination with Yard Master.
- Material Collection from Stations and Parcel Depots.
- Scrap collection from all shops Segregation and forming of lots carried out in coordination with other shop workers

Nowadays, the above works are doing individually by the concern shop itself. **Moreover Loading Shop is also closed.**

3.14.3 Sanction Vs Requirement

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	1	1	0	1
Tech - I	2	0	0	2
Total	3	1	0	3

Presently, one staff is working to FBW against the sanctioned strength of 3. Hence these 3 sanctioned posts are recommended for surrender and the **one actual staff may be charged against the SNP** and this post may be utilized in FBW or redeployed in the place of vacant posts to other shops of EWS/AJJ on the basis of the multi skilled working.

Hence, the work study team has not allowed any manpower requirement to continue in the Loading shop.

3.14.4 **Recommendation No.8**

One post of Sr.Tech in GP Rs.4200/- and 2 posts of Tech.Gr.I in GP Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank **(Total-3 posts)**

3.15 **TINKER SHOP (No.609)**

3.15.1 **Staff strength details at Tinker Shop:**

As on March - 2021, 2 staff is working against the sanctioned staff strength of 5. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	3	2	1	0
2	Tech – I	2	0	2	0
3	Tech - II	0	0	0	0
4	Tech – III	0	0	0	0
5	Helpers	0	0	0	0
	Total	5	2	3	0

3.15.2 **Manufacturing items at Tinker Shop:**

This shop is manufacturing of Hand Signal lamps, gate lamps, Motor Trolley Cable Work, Mud Guards, Cash boxes, Tapal boxes, first aid boxes, LV Boards, Destination Boards, Speed Limit Board and all other items made of G.I. Sheets etc. **All items are out of manufacturing, at present this shop has completely closed from July-2017.**

3.15.3 **The following machines and equipments available at this Shop:**

51

Blower : 1
 Drilling Machine : 1
 Guillotine Shearing Machine : 1
 Spot Welding Machine : 1

Since the manufacturing works are stopped from July-2017, the above machineries are to be used in needy places.

3.15.4 Sanction Vs Requirement:

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	3	2	0	3
Tech - I	2	0	0	2
Total	5	2	0	5

Presently 2 staff of Sr Tech is available against the sanctioned strength of 5. But no production activities in this shop. Hence, these 5 posts are recommended for surrender and **two Sr Tech actual may be charged against the SNP** and the staff to be utilized in other needy places at EWS/AJJ.

3.15.5 Recommendation No.9

The following posts are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

- 3 posts of Sr.Tech in GP Rs. 4200/-,
- 2 posts of Tech – I in GP Rs. 2800/-,

(Total - 5 posts)

3.16 PAINT SHOP (No.610)

3.16.1 Staff strength details at Paint Shop:

As on March - 2021, 4 staff is working against the sanctioned staff strength of 7. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	5	4	1	0
2	Tech – I	2	0	2	0
3	Tech - II	0	0	0	0
4	Tech – III	0	0	0	0

52

5	Helpers	0	0	0	0
	Total	7	4	3	0

Presently 4 staff is working against the sanctioned strength of 7. This shop is performing the painting of finished products of EWS/AJJ.

In EWS/AJJ, most of the works are out of manufacture and the available 4 staff of deployment is found satisfactory for painting of finished products at EWS/AJJ and the same is allowed to continue on need base. Hence, the remaining 3 posts has recommended for surrender.

3.16.2 Sanction Vs Requirement:

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	5	4	4	1
Tech - I	2	0	0	2
Total	7	4	4	3

3.16.3 Recommendation No.10

The following posts are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

- One post of Sr.Tech in GP Rs. 4200/-,
- 2 posts of Tech – I in GP Rs. 2800/-,

(Total - 3 posts)

3.17 Millwright Shop (No.612):

3.17.1 Staff strength details at Millwright Shop:

As on March - 2021, 36 staff is working against the sanctioned staff strength of 70. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	20	20	0	0
2	Tech – I	39	9	30	0
6	MVD Tech-I	1	1	0	0
	Tech - II	6	0	6	0
7	WCR Tech -II	1	0	1	0

53

4	Tech – III	3	6	0	3
5	Helpers	0	0	0	0
	Total	70	36	37	3

In Millwright shop (both Line side and Shop side) 36 staff is working against the sanctioned strength of 70 in which 2 posts are operated under Ex-Cadre (MVD in Tech – I and WCR in Tech –I). Millwright Shop consists of line side and Shop side. Out of the 36 actual staff, 11 staff is working in MW Line side and the remaining 25 staff in MW Shop side. In Millwright, Shop side mainly caters for the maintenance and repairs of machines at EWS/AJJ.

3.17.2 **MW Line side:**

Line side are manufacturing of Motor Trolley, Dip Lorry, Jacks etc. ***Presently this section stopped the manufacturing work.*** The service and maintenance works of Line side comprises of vehicle maintenance and repairs. The actual of 11 staff is working in Vehicle operation, maintenance and repair works. The available vehicles are as below.

- Jeep - Nil - Outsourced
- Lorry - 2 (Working – 1)
- Mobile Cranes - 2
- DG-sets - 5
- Fork lifts - 5
- Tractors - 2 (Working – 1)

The above vehicles are operating and maintaining the daily production works like material movement, loading, unloading, staging, scrap collection etc for all shops of the EWS/AJJ. Whenever the requirement arises from the shops they have to meet the demand on priority basis. The work study team has considered the manpower requirement is based on the need base and tabulated below.

3.17.3 **Requirement of Manpower in Line side:**

54

Sl.No	Work description	Present deployment	Requirement assessed by Work study on need base
4	Lorry/Tractor	10	1
5	Fork lift		3
6	Mobile crane		3
8	Gen-Sets/Vehicle Maintenance & Repair/Store including diesel store		6
	MV Driver	1	1
	WCR	-	1
	Sub Total	11	15
11	LR at 12.5% (1.88 say 2)		2
	Requirement at MW Line side		17

From the above table it is shown that the study team has allowed the manpower requirement of Millwright Line Side as 17 instead of 11 staff. Hence 17 staff is sufficient to manage the present work load.

3.17.4 MW Shop Side:

This shop carries out the maintenance and repair works of various types of machines available at EWS workshop. At present 152 machines are regularly utilized for production works in various shops. Out of 152 machines, some machines are treated as critical machines such as EOT cranes, Air compressors, Planning Machines, Drilling Machines, PSM, Warp removal Machine, CNC-End milling Machine etc. These are required regular monitoring/maintenance. In addition to the above this shop does the erection, installation, commissioning of new machines and extends technical expertise for the periodical maintenance of Pamban Bridge in co-ordination with Structural shop/EWS/AJJ and SSE/Works/Pamban.

The work study team has considered the above and arrived the manpower requirement based on the work load of production and service shops on need base.

3.17.5 Manpower requirement of Millwright Shop side:

55

Sl.No	Work description	Present deployment	Requirement assessed by Work study on need base
1	Water Pump operator	1	1
2	Air Compressors operator-3 Nos	3	3
3	Office/Store	2	1
4	Planning Machines	19	3
5	Air compressors		3
6	EOT – Cranes		3
7	PSM, CNC-End Milling, Warp Removal M/c, Pressing M/Cs, Hoists, Grinding M/Cs, Bandsaw, Oil fired furnaces, Pneumatic hammers & Misc. Machineries.		5
8	Drilling machines		6
9	Lathe machines		
10	Hydraulics/Pneumatics items		
	Sub Total	25	25
	LR at 12.5% (3.12 say 3)		3
	Net Requirement		28

From the above table it is shown that the study team has allowed the manpower requirement of Millwright Shop Side as 28 instead of 25 staff. Hence 28 staff is sufficient to manage the present work load.

Therefore, the Total requirement of manpower for the entire Millwright shop is 45. (17 for Line side and 28 for Shop side)

3.17.6 Sanction Vs Requirement

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	20	20	20	0
Tech – I	39	9	14	25
MVD Tech – I	1	1	1	0
Tech – II	6	0	6	0
WCR Tech – I	1	0	1	0
Tech - III	3	6	3	0
Total	70	36	45	25

3.17.7 Recommendation No.11

25 posts of Tech.Gr.I in GP Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank
(Total-25 posts)

3.18 FLASH WELDING SHOP (FBW No.616)

3.18.1 Staff strength details at Flash Butt Welding Shop:

As on March - 2021, 15 staff is working against the sanctioned staff strength of 28. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	9	9	0	0
2	Tech – I	17	2	15	0
3	Tech - II	2	1	1	0
4	Tech – III	0	3	0	3
5	Helpers	0	0	0	0
	Total	28	15	16	3

3.18.2 Work load at FBW Shop:

The manufacturing of 52/60 Kg rails welded joint is done by the FBW shop. ***But the welding plant is out of order from April – 2018 and the production work stopped by the departmental staff.*** At present the production work is carried out by the contract staff.

3.18.3 Production details from 2019-20 to 2020-21:

Year	RB Target	No. of Joints Welded by Contractors		Total
		Plant-I	Plant-II	
2019-20	20000	6235	13175	19410
2020-21	15000	2220 *	10644	12864

*Welding in Plant I started from 2nd Sep.2020 after replacement of machine.

3.18.4 Despatch details:

Sl No	Year	Despatch details	
		13/26m in Km	130m Panels in Km
1	2019 – 20	58.630	154.310
2	2020 – 21	57.260	120.075

3.18.5 Machineries and Plants at FBW/AJJ:

1. Bimetal Band saw Machine - 2 Nos.
2. Post/Pre Straightening Machine - 2 Nos. (1 No. Proposed for DS8)
3. Cutting and Drilling Machine - 1 Nos. (Proposed for DS8)
4. Air Compressor (Electric driven) - 1 No.
5. Air Compressor (Diesel Driven) - 1 No.
6. Transverse Load Testing Machine 200 MT - 1 No.
7. Brinnel Hardness Testing Machine - 1 No.
8. 250 KVA Diesel Generator - 1 No.

3.18.6 Testing of Welded Joints at FBW Shop:

FBW Shop/AJJ is the only facility available over Southern Railway for the testing of welded joints. The rail welded joints of both AT (Alumino Thermic Welding) and Flash Butt Welded joints has been tested by the various agencies like construction, RVNL, private contractors etc. The testing parameters are hardness, traverse load test, macro & micro examination as per RDSO manual for assessing the quality of joints, competency of welders and standardisation of welding parameters of welding machines.

The details of welded joints received for testing and the revenue earned for the past 2 years are furnished below.

YEAR	Type of Welding Joints	No of Tests	Amount in Rs.
2019-20	FBW	132	1091288.00
	AT	87	788130.00
	Macro Examination	77	1131813.00
2020-21	FBW	41	452220.00
	AT	58	651985.00
	Macro Examination	73	1047334.00
Total Revenue Earned on account of welded joints testing			Rs.51,62,770/-

Preparatory works for the above testing, maintenance of loading machines, cutting of micro test pieces etc are being done by departmental staff and the tests are conducted by CMT/LW/PER & ACMT/EWS/AJJ staff respectively.

3.18.7 Staff deployment Vs Requirement:

There are 15 departmental staff are working like inspection of welded joints done by contract staff, maintenance of plants and equipments, accompanying with CMT staff testing of welded rails for hardness, transverse, macro and micro testing, monitoring of wagon movement for loading, unloading of rails etc. These are the regular works involving welded rail joints along with the contract staff at FBW. Hence the work study team has arrived manpower requirement on need base and tabulated below.

Sl. No	Nature of Duties	Presently Staff deployed	Requirement assessed by Work Study on Need base
1	Dimensional inspection of Welded joints and related activities produced by the contractor, monitoring the rework/rectification and recording in the register as per the prescribed format	2 (Plant I & II)	2
2	Maintenance of Electric Wire Rope Hoists – 40 Nos. for loading/ Unloading of free rails and welded panels and Conveyor system for Zinc metalizing works, maintenance of Compressor, Band saw machine, Transverse testing machine, small tools etc.	4	4 (Incl Gen-Set)
3	Cutting of Test pieces for Macro & Micro examination of test welded joints for Contractor and other open line/CN/RVNL etc.	2	2
4	Monitoring Wagon movement for feeding of rails to welding plant inside FBW and co-ordination with yard staff/TXR/SMR movement of 4 Tier/5 Tier EUR wagons for despatch of welded panels for despatch to divisions. Identification of	2	2

	repair/Sick/POH/ROH wagons and arranging of suitable replacement wagons.		
5	Inspection of Zinc metalizing of welded panels by contractor for coating thickness of Zinc and paint and recoding of data as per the prescribed format in the registers for measurement book	1	1
6	Attending minor repairs to 4 Tier/5 Tier wagons, End door fixing, damaged lever arm changing, Roller changing in funnel/Chute wagons..etc.	2	2
7	Progress monitoring of production – Daily accounting of production of welded joints by contractor, Rails utilization for welding, Daily stock position of rails/Welded panels, reporting of daily progress and rail stock position to H.Qrs., Preparation of Challans, Issue notes, RMC note for despatch of free rails, Welded panels to divisions as per Booking Instructions issued by CTE's office, Preparation of Weekly, monthly progress reports, PCDO statements for H.Qrs and Railway Board. Entering of daily progress, despatch and stock position of rails in TMS software	1	1
8	Store Activities – Preparation of Stock and Non stock Indents for consumables, spares, material accounting in DBR/DBI and stock ledgers, preparation of DS 8 for scrap material generated and other related activities.	1	1
9	Loading of free rails 13/26m rails in wagons to EWS and other consignees are done by our staff as there is no contract available for the work. Material collection from EWS, Other workshops and firms, handing over of scrap materials to GSD/PER are being done with available staff on priority basis. Assistance for electrical department in case of major failures/repairs since only one staff is available in Electrical dept.	-	2

	Total	15	17
	LR at 12.5% (2.1 say 2)	-	2
	Total Requirement at FBW	15	19

From the above table it is shown that the study team has allowed the manpower requirement of FBW Shop as 19 instead of 15 staff. Hence 19 staff is sufficient to manage the present work load.

3.18.8 On going works for infrastructure development at FBW shop:

Work for additional Infrastructure required for producing 20 Rail panel has been sanctioned to the tune of 4.5 Crores and work for concrete paving of loading platforms, provision of additional gantries – 8 Nos. for free rail unloading, Supply and commissioning of 50 New Hoists for replacement of old hoists and to provide in new gantries, Replacement of roof, Synchronization of 18 hoists for 20 Rail panel handling etc and the work is under progress.

The additional requirement is to be created at the time of commissioning the extension of new infrastructure.

3.18.9 Sanction Vs Requirement

Category	Sanction	Actual	Requirement	Surplus
Sr.Tech	9	9	9	0
Tech - I	17	2	8	9
Tech – II	2	1	2	0
Tech - III	0	3	0	0
Total	28	15	19	9

3.18.10 Recommendation No.12

9 posts of Tech.Gr.I in GP Rs. 2800/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank

(Total-9 posts)

3.19 Electrical Shop (No.617):

In EWS/AJJ, the Electrical shop is broadly divided in two groups. First one is Electrical (GS) for maintaining power house, sub stations and machineries & plants maintenance etc. The latter is EOT crane operations and the details of works in each section are briefly discussed one by one as below.

3.19.1 Staff strength details at Electrical (GS) Shop:

As on March - 2021, 14 staff is working against the sanctioned staff strength of 20. The grade wise artisan staff detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	5	3	2	0
2	Tech – I	9	1	8	0
3	Tech – II	1	3	0	2
4	Tech – III	3	6	0	3
5	Helpers	2	1	1	0
	Total	20	14	11	5

At present 14 Artizan staff is working against the sanctioned strength of 20. The staff distribution is done based on the day-to-day work requirement.

3.19.2 Work load at Electrical (GS) Shop:

This shop is responsible for power distribution and maintenance of all electrical gears in Workshop as well as Dy.CE's Office premises. There are 3 substation having capacity 500 KVA, 750 KVA and 1000 KVA. Substation I covers Points and crossing shop, Millwright shop, AWM office AMM office and Dy.CE office.

Substation II covers BS shop, Machine shop, Tool room, Fitter shop, Signal Fitter shop, Glued joint shop and Paint shop, Substation III cover structural shop, ACMT lab, Foundry shop, Welding plants and drilling machines. In addition to maintaining the power distribution,

Erection, installation and commissioning of new machines, cable laying work also carried out.

3.19.3 Electrical shop is generally responsible for:

- Ensuring power supply to various shops, administrative office, canteen etc.
- Periodical maintenance of transformers.
- Manning of 500 KVA, 750 KVA & 1000 KVA Sub stations.
- Maintenance of ACBs, OCBs, LT boards in Sub station.
- Maintenance of HT & LT Earths.
- Electrical failure attention of machines & plants.
- Preventive maintenance of all machines inside workshop.
- Day to day maintenance of lights, fans street lights etc, inside workshop, administration offices and canteen.
- To ensure electrical safety drives.
- Carrying out annual maintenance works of M & P inside workshop every year during summer holidays.
- Installation of new machines

3.19.4 **Electrical (GS):**

The Electrical (GS) shop is a maintenance & service shop. It is functioning in two ways, first one is operating and maintaining the power station such as Sub stations and accessories with DG-set and another is periodical/preventive and break down maintenance of machines and plants in EWS and FBW/AJJ respectively. The study team has arrived the man power requirement separately such as Power side based on energy consumption per month and Machinery & plants based on the available machineries on need base.

3.19.5 **Annual Energy Consumption:**

The monthly energy consumption details are tabulated for EWS & FBW/AJJ from April - 2019 to Mar - 2021.

Sl.No	Month & Year	Year 2019-20		Year 2020-21	
		EWS	FBW	EWS	FBW
1	APR	44100	2650	7670	1580
2	MAY	42850	2250	14100	2000
3	JUN	39092	2060	18620	3200
4	JUL	41500	5050	18980	3500
5	AUG	42100	4650	20260	3450
6	SEP	37190	3650	37190	3650
7	OCT	40650	5680	40560	4750
8	NOV	52350	5950	22930	3200
9	DEC	46500	4950	27500	3480
10	JAN	46500	4950	26030	2750
11	FEB	40230	5800	28150	2590
12	MAR	36750	4350	35100	5450
	Total	509812	51990	297090	39600
	Average/Month	42484.33	4332.50	24757.50	3300.00

From the above table shown that, the energy consumption is less in the year 2020-21 due to COVID – 19. So, the work study team has considered for manpower calculation and taken the energy consumption for the year 2019 – 20. The monthly average energy consumption is 42484 units for EWS/AJJ and 4333 units for FBW/AJJ and making a **total of 46817/units/month**. This amount of electrical energy consumption is utilised for EWS & FBW. The manpower requirement is arrived by using the current IR average of bench marking.

3.19.6 **Man Power Ratio (Bench marking) of Electrical power:**

Man power ratio of electrical power has been classified as two Groups viz. divisions having energy consumption of more than 23,00,000 units per month and divisions having less than 23,00,000 units per month.

The manpower required for power side maintenance is arrived based on the MPR (benchmark) provided by the Efficiency Research Directorate of Railway Board vides Benchmarking Report – Oct - 2020.

In the electrical power maintenance, there are lot of areas such as Sub stations, transformers & switch gears, UPS, Pumps, Street/road lights, meter readings, water coolers, operation of DG-sets etc.

3.19.7 As per the report, MAS division is consuming more than 23 lakh units/month and man power ratio is 0.18 men per 000 units in Southern Railway. The bench marking of electrical power for the month of Oct – 2020 is described below.

Current IR average - 0.14 Men / 000 units
Current Man power ratio (bench marking) - 0.04 Men in KUR div. in ECoR

3.19.8 The work study team proposes to adopt the bench marking as the methodology to arrive the man power requirement. According to the bench marking of Oct-2020, current IR average is 0.14 men/000 units. Hence, the requirement of staff based on this methodology is as follows.

Average energy consumption/month = 46817 units
Bench marking (0.14 staff per 000 units based on current IR average.) = $46817/1000 \times 0.14$
Requirement of man power is = 6.55 say **7 staff**.
This includes LR/RG.

These 7 staff are exclusively used for power side of EWS & FBW/AJJ such as Sub stations, transformers, switch gears, HT & LT connections, DG – set etc., for periodical and break down maintenance.

3.19.9 **Machinery & Plants Maintenance/Repair works:**

Details of Electrical and Mechanical Machineries at EWS/AJJ:

Sl.No	Type	Quantity	Remarks
1	Electrical	06	Transformer -04 D.G. Set -02
2	Mechanical	231	-
	Total	237	

At present 231 machines/plants are used in EWS and FBW. In FBW shop having 40 no of hoists, 40 no of conveyers (approximately) etc of which these machines require electrical maintenance from Electrical shop along with MW staff.

The sanctioned strength of 20 (18 + 2 Helpers) is being utilized for electrical maintenance of machines & plants but in actual is 14 (13 + one helper). Out of 20 staff in sanctioned strength, 7 staff is deputed for operation & maintenance of Sub stations for both EWS & FBW/AJJ. One staff is used for office/Store and the remaining 12 staff is utilizing for machine maintenance and other related accessories.

The work load of EWS/AJJ is reduced every year. Therefore the maintenance of electrical machinery and plants has also reduced. Hence the work study team has considered and allowed 12 staff (including LR) can be continued as such on need base.

Hence the work study team has arrived 20 staff of Electrical shop.

3.19.10 **Electrical (EOT):**

As on March - 2021, 7 staff is working against the sanctioned staff strength of 12. The grade wise EOT Crane operators detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	3	2	1	0
2	Tech – I	6	2	4	0
3	Tech – II	1	3	0	2
4	Tech – III	2	0	2	2
5	Helpers	0	0	0	0
	Total	12	7	7	2

EOT Crane operator is mainly catered to operate EOT cranes of various shops in EWS/AJJ. At present, the need for EOT crane works is stopped in many shops and also reduced the work load in some

shops. The work study team has arrived the manpower requirement is based on the work load of production shops on need base.

3.19.11 **Manpower requirement of EOT Crane operators:**

Sl. No	Shop	No of EOT Cranes	Working Condition		Staff requirement by work study team on need base
			Working	Not Working	
1	Points & Crossing	5	4	1	3
2	Structural	5	5	-	4
3	Foundry	3	3	-	1
		Total			8
		LR at 12.5%			1
	Total Requirement of EOT Drivers				9

From the above table, Points & Crossing and Structural Shops are mainly involving the production works. The foundry shop is the stocking of finished items of structural shop. Further, MW shop and Black smithy shop having one EOT crane in each shop and there is no production work and no need to operate the EOT crane.

Hence, the work study team has allowed 9 staff for EOT crane drivers and the remaining 3 vacant posts recommends for surrender.

3.19.12 **Sanction Vs Requirement**

Sl.No	Category	Sanction	Actual	Requirement	Surplus
1	Sr.Tech	3	2	3	0
2	Tech – I	6	2	4	2
3	Tech – II	1	3	1	0
4	Tech – III	2	0	1	1
5	Helpers	0	0	0	0
	Total	12	7	9	3

3.19.13 **Recommendation No.13**

2 vacant posts of Tech-I in GP Rs. 2800/- and one vacant post of Tech-III in GP Rs.1900/- are found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.

(Total - 3 posts)

3.20 PCO staff (Progressmen & Planner):

3.20.1 Staff strength at PCO (Progressman & Planner):

As on March - 2021, 2 staff is working against the sanctioned staff strength of 3. The grade wise Progressman & Planner detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Sr.Tech	2	1	1	0
2	Tech – I	1	1	0	0
	Total	3	2	1	0

There are 2 staff (Sr.Tech and Tech-I) available against the sanctioned strength of 3 and one post of Sr.Tech is vacant. The workshop is functioning of non incentive scheme, the work load is drastically reduced instead of incentive scheme.

The duties of progressmen is monitoring and maintaining progress particulars of all shops and planner is preparing process planning, material planning, etc. Hence, the work study team has considered and allowed the two staff continuing the above works on need base. Therefore, the remaining one vacant post of Sr.Tech may be recommended for surrender.

3.20.2 Sanction Vs Requirement

PCO – staff (Progressman & Planner)	Sanction	Actual	Requirement	Surplus
Sr.Tech	2	1	1	1
Tech. Gr-I	1	1	1	0
Total	3	2	2	1

3.20.3 Recommendation No.14

One post of Sr.Tech in GP Rs. 4200/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.
(Total-1 post)

3.21 Requirement of Supervisors:

The Work shop is functioning under Non-Incentive Scheme. The Supervisor's works involves various areas like supervising the artisans staff, store activities, dealing of contract works, maintenance of employee's safety, co-operation with recognized union members etc. The work study team has considered and allowed the supervisors based on the actual artisan staff available in the individual shops/sections on need base.

3.21.1 Artisans staff strength as on April-2021 Vs Supervisors Requirement:

SI No	Shop	Artisan staff		Present Deployment		Allowed by Work Study on need base	
		Sanc	Actual	SSE	JE	SSE	JE
	Shop Supervisors						
1	Machine Shop	53	43	1	-	1	1
2	Fitter Shop	14	13			1	-
3	Signal Fitter Shop	16	9			-	-
4	Blacksmithy Shop	36	27	1	-	1	1
5	Crossing Shop	71	39	3	1	2	1
6	Structural Shop	88	39	4	-	2	1
7	Welding Shop	60	43	1	-	2	-
8	GJ(WW) Shop	14	14	2	-	2	-
9	GJ(C) Shop	18	8				
10	GJ (Helper)	0	1				
11	Tinker Shop	5	2				
12	Painter Shop	7	4				
13	Loading Shop	3	1				
14	Millwright Shop	70	36	2	-	3	-
15	FBW Shop	28	15	3	-	2	1
	Total - A	483	294	17	1	16	5
	PCO Section						
16	Planning	3	2	1	-	1	-
17	Progress			0	-	1	-
18	Rate Fixing			1	-	1	-
19	Inspection			1	-	3	-
20	BTC & Safety			1	-	1	-
21	Computer Centre	-	-	1	-	1	-

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	Total - B	3	2	5	-	8	0
	Staff worked on account of Ex-Cadre, Temporary transfer/Deputation to other Offices/Sections						
22	PCE/o/HQ	-	-	1	-	1	-
23	CTE/o/HQ	-	-	1	-	1	-
24	Dy.CPLO/o/HQ	-	-	2	-	2	-
25	TVC Division	-	-	1	-	1	-
	Total - C			5	1	5	0
	Electrical Shop						
26	Electrical (GS)	18	13	At present 2 SSEs are working at EWS/AJJ in division control posts			
27	Electrical (Helper)	2	1				
28	Electrical (EOT)	12	7				
	Total - D	32	21				
	Total-(A+B+C+D)	515	317	27	1	29	5
	LR at 12.5% (29+5 = 34 Supervisors 4.25 say as 4)					4	-
	Trainee Reserve					1	-
	Total - SSE & JE					34	5
	Total Requirement of Supervisors					39	

Hence the work study team has arrived the requirement of Technical Supervisors over EWS/AJJ as 39 staff.

3.21.2 Sanction Vs Requirement

Supervisory staff	Sanction	Actual	Requirement	Surplus
SSE	39	22	34	5
JE	5	1	5	0
Total	44	23	39	5

3.21.3 Recommendation No.15

5 posts of SSE in GP Rs. 4600/- is found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.

(Total-5 posts)

3.22 Drawing Section:

The various drawings are received from CBE/o/HQ and RDSO for manufacturing in EWS/AJJ. At present one JE/Drawing (Trainee) is working, but in the sanctioned statement is shown that one JE/Drawing in the actual by the HQ control. Moreover, 3 Sr.Tech are deputed in drawing section from Points & Crossing shop and

Machine shop. The following works are dealt in drawing section as below.

- Preparation of all types of drawings
- Taking print out of RDSO drawings is 750 Nos (Approx) during the year 2020-21
- Issue of drawing to concern shops
- Making of material list from drawings
- Preparation of estimates
- Scanning of 600 Nos of drawings during the year 2020-21
- Scanning of EWS temporary drawing – 400 No during the year 2020-21
- All the miscellaneous works assigned by the DY.CE
- Assisting Sr,SE/Works in his day to day works.

The requirement of manpower arrived in drawing section is based on the above list of activities. In EWS/AJJ, most of the works are out of manufacturing and only the limited items are manufacturing in Structural, Points & Crosing, Glued Joints, Black smithy and FBW shops. So the drawing section activities are also reduced and the 3 Sr.Tech worked in drawing office is not justified. Moreover, the above works are doing individually by the shop supervisors itself.

However, the work study team has allowed one artisan staff for handling and maintaining the drawings and the remaining two staff may be sent back to the parent shops.

3.23 Ministerial Staff in EWS/AJJ:

The ministerial staff is working of two categories such as **Works Branch and Personnel branch** in EWS/AJJ. The nature duties and manpower requirement is arrived one by one as below.

3.24 Ministerial Staff in Works Branch:

3.24.1 Staff strength at Ministerial staff in works branch:

As on April - 2021, 20 staff is working against the sanctioned staff strength of 36. The grade wise detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Ch.OS	8	7	1	0
2	OS	23	12	11	0
3	Sr.Clerk	4	1	3	0
4	Jr.Clerk	1	0	1	0
	Total	36	20	16	0

In the above table, the actual staff available is 20 against the sanctioned strength of 36. These staff is distributed and worked in various sections like Time office, Administration section, Store section, General section and Account section. The duties and manpower requirement is arrived as follows.

3.24.2 Time Office:

The time office work is also divided into two sections as Time Keeping office and Central time office. The following staff and activities are involved in time office as tabulated below.

a) Time Keeping Office:

Category	Portfolio
1. Ch.OS	Incharge of Central Office and Time Office GA card & GA List correspondence and Pay sheet. Medical Card correspondence. Issuing of manual Pass & PTO. Incharge of Pass Issuing Authority (PIO) in HRMS. In charge of Siren duty and all time booths.
1. OS (Time Keeping Clerk & Time Booking Clerk) Shops : Welding shop, Black Smithy, Millwright & Group V shops & FBW	Time keeping work: Witnessing of Time booth at Welding shop, Black Smithy, Millwright & Group V shops and FBW and Act. Apprentices. Maintenance GA card, Booking of Leave particulars & wages. Time Booking work: Booking of hours & work orders in Tally Sheet and Booking of labour summary. Feeding of all particulars thro IPAS to CRIS Spl.Work : Forwarding of Pass & PTO in HRMS

2. OS (Time Keeping Clerk & Time Booking Clerk) Shops : Machine shop, Crossing, Fitter & Signal Fitter shops, Rivetter and Electrical Shop	Time keeping work: Witnessing of Time booth at Machine shop, Crossing, Fitter & Signal Fitter shops, Rivetter and Electrical Shop and Act. Apprentices. Maintenance GA card, Booking of Leave particulars & wages. Time Booking work: Booking of hours & work orders in Tally Sheet and Booking of labour summary. Feeding of all particulars thro IPAS to CRIS Spl.Work : Forwarding of Pass & PTO in HRMS
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b) Central Office Section

Category	Portfolio
1. Ch.OS	Maintenance of LM 54 Registers & Leave accounts and related works of Black Smithy, Crossing, Welding Electrical, FBW, Tinker, Glued Joint, Painter & FBW and Act. Apprentice. Serving employees Pass, PTO and other related works. Preparation of forwarding of Pass & PTO thro HRMS
1. OS	Maintenance of LM 54 Registers & Leave accounts and related works of Fitter, Signal Fitter, Machine, Rivetter, Millwright, Loading, Ministerial staff & Supervisory staff.

c) Time booths locations and shops:

Time booth Location	Name of shop
Booth No.1 @ Crossing Shop	Machine shop
	Crossing shop
	Electrical
Booth No.2 @ Welding Shop	Welding shop
	Black Smithy Shop
	Act.Apprentice
	App.JE
Booth No.3 @ Millwright shop	Loading
	Millwright shop
	Tinker Shop
	Painter Shop
	Glued Joint shop

Booth No.4 @ Gr.V Shop	Rivetter Shop
	Fitter Shop
	Signal Fitter
Booth No.5 @ FBW shop	FBW

d) Duty Hours:

1. **Time Office** - for Time keeping clerk (TKC) & Time booking Clerk TBC)

TKC & TBC	Monday to Friday	06.30 to 10.15 Hrs & 11.15 to 14.45 Hrs
	Saturday	06.30 to 10.15 Hrs
Time Office Staff	Monday to Friday	08.45 to 12.30 Hrs & 13.30 to 17.00 Hrs
	Saturday	08.45 to 12.30 Hrs

2. **Central Office:**

Central Office staff Pass section	Monday to Friday	08.45 to 12.30 Hrs & 13.30 to 17.00 Hrs
	Saturday	08.45 to 12.30 Hrs

e) Manpower requirement at Time office:

At present, 5 staff is looking after the time office work, out of which one Ch.OS is the incharge of both time office and central office 2 staff in Time keeping office and 2 staff for central office.

In EWS/AJJ is functioning under non-incentive scheme, the time office work has drastically reduced as compare to incentive scheme. Hence the work study team has allowed 5 staff including leave reserve for the current work load to manage the time office work and continued on need base.

Hence the work study team has arrived 5 staff on need base at time office activities.

3.24.3 Administrative Section:

All letter correspondence, receipts and dispatch work are dealt at Dy. CE/O/EWSAJJ. The following staff and activities are involved in administrative section as tabulated below.

1) Duties of Administrative Section at EWS/AJJ:

Sl. No.	Designation.	Deployment of Works
1	Ch.OS/ST &Admn (Dual Charge)	<p>Ch.OS/Store is acting as Ch.OS/Admn of the Additional Incharge of Admin Section.</p> <p>Putting up the Tapals Received through Postal/Courier/Other Railway Offices to all the Officers for perusal and after their endorsements arrange to send the same to the concerned Shops/Sections.</p> <p>Making Arrangements for all the Official Functions.</p>
2	OS	<p>Correspondences Letters dealt by various sections like Personnel Branch, Accounts Section, Stores Section, General Section , PCO and Shop Floor in connection with Staff Matters, CG Appointments, RTI Cases, Contractors, COFMOW/NDLS, RDSO, SAIL, Other Private Firms etc., are received by the Despatch Section and Registered with Running Serial Number @ Properly sealed and sent to the respective Addresses through Registered Post / Speed Post / Ordinary Post respectively.</p> <p>All the letters addressed to the HQ Office and other Railway Offices are received / registered and arranged to send through the Special Man.</p> <p>Recoupment of Postal Stamps and maintaining the accountal of the Same.</p> <p>Managing the works of Ch.OS/Admn in his absence, duly Putting up the Tapals Received through Postal/Courier/Other Railway Offices to all the Officers for perusal.</p> <p>Managing the Works Of Record Sorter in his absence, duly Registering the Letters received from various Railway Offices/Private Firms with an endorsement of Officers and arranged to send the same to the concerned sections as per Officers endorsement.</p>

2) Despatch details:

The following dispatch correspondence details are dealt by the Administrative section in EWS/AJJ.

Year	Speed Post	RPAD	Ordinary	Total
2019-20	10	439	379	828
2020-21	-	529	162	691

75

Total	10	968	541	1519
Average/Month	0.42	40.33	22.54	63.29
Average/day (26)	Say as 1	1.54	0.87	3.41
Total despatch correspondence as 3.41 again say as 4 dealt per day				

At present 2 staff are looked after the administrative section of the above said works. In present situation there is a lot modification through digitization of e-office, HRMS, internet etc, and the dealing of receipt & dispatch activities are dealt through digitization and hence reduced the manual work. Further the average of 4 despatch correspondence is dealt per day. So, the 2 staff is sufficient to manage the present system of work load and continued on need base.

Hence work study team has allowed 2 staff on need base at Administrative section.

3.24.4 Store Section:

Duties of Stores Section:

Sl. No.	Designation	Allotted Works
1	Ch.OS- I	Over all In-charge of stores section Dealing with NS indent of steel items and allied correspondence work. Follow up of Steel items @ PCMM/PER, RBC/Kolkata and processing for FA & CAO/S&W/PER's Finance vetting through e-Office and arrange with PCMM Office for releasing of Purchase Order. In addition, also, assigned with the duties of the in charge of Admin Section.
2	Ch.OS-II	Dealing with NS indents on PCMM/PER, CE/TP/MAS, M&P, COFMOW and SMM/BS indents through IREPS in IMMS processing and all the allied correspondences..After the receipt of the M&P items against COFMOW's Order, releasing of the Proving Test Certificate. Dealing with stocked indents from all shops based on the EAR. Dealing with all shop DS.8s received and forwarded to GSD/PER.

3	OS	Receipt of Bills (other than steel) from the Suppliers, arrange to Pass the Bills (for Both SMM/BS & PCMM/PER level Purchase Orders) and put up to Sr.SO(A) with Ledger Posting.
4	OS	Dealing with all the correspondence works (Stock & Non stock) both Steel & Other than Steel in connection with the Modification of Purchase Order (DD Extension, Excess and short supply and Rejection items etc..) Uploading of all Non-Stock Items (Steel & Other than Steel Items) Bills in IPAS. All shops NS Indents received from Various Shop SSE's. Preparing through IREPS in IMMS scrutinized, checking of Budgetary Offers and forwarded to Sr.So(A) for Funds Certification. After getting Funds from Sr.So (A) processing for Finance Vetting e-Office. After Finance vetting forward the same for Procurement action with PCMM/PER and SMM/BS/AJJ accordingly through IMMS and the entire allied Correspondences.
5	OS	Passing of NS Steel Supplier's Bills Upto Ledger Posting and put up to Sr.SO(A)/EWS/AJJ. Opening of all Purchase Order Dockets for PCMM/PER, SMM/BS/AJJ & CE/TP/MAS. Processing of Inspection Certificate and Completion Report. Sending the Yellow Order Files for the certification of the Concerned SSEs after the receipt of the Ordered Supply. She has to prepare 38A Statement material – group wise and submit the same to FA& CAO/S&W/PER. All the Stores Finance references, SV & Stock Sheets.
6	OS	Looking after all the stationery items recoupment, accountal and issues to Administrative Office & the Entire Shop Floor. Chasing of Stationery Items at GSD/PER and RPM Press and Private Agencies. Update the position of T&P items with T&P registers. Condemnation and process for replacement. Preparation and Processing of both Stocked & NS Indents for Stationery Items.

Presently, 6 ministerial staff is looked after the store section of the above said works. In present situation there is a lot modification through digitization of e-office, e-tender, IRPES, IMMS, HRMS, internet etc.

Moreover, the most of the items are out of manufacturing in EWS/AJJ and hence, the procurement has also reduced for manufacturing. So, the 6 ministerial staff (Including LR) is sufficient to manage the present system of work load and continued on need base. Further,

store section is not provided the Stocked indent & NS indent particulars.

Hence work study team has allowed 6 staff on need base at Store section.

3.24.5 **General Section:**

The following staff and duties are tabulated below.

1) Ch.OS/Genl. Sectoion:

Sl. No.	Description of duties	Remarks
1	Processing of all EWs and FBW E-Open Tenders to upload the financial and technical tabulation and terms and conditions of IREPS and publishing the same in newspaper through public relation officer, opening the day download all the offers, terms and conditions quoted by the firms and contractor than tabulation and technical suitability T.C. Minutes after getting approval of tender committee the case file sent for sanctioning authority for sanction and other allied works. LAW Branch vetting the Bank Guarantee and power of attorney and returning the earnest money deposit of unsuccessful tenderer. The letter of acceptance will be prepared and sent to the I I Offerer to entrust the work, preparing the contract agreement and Rider Agreement. M.Book will check with Kuttcha register, preparing the bill, collecting the tax invoices, labour engagement letter supervisor letter from concerned SSE preparing the covering letter and enter into voucher register, bill entry into IPAS and forward to FA&CAO/S&W/PER for passing the bill direct to the firm.	Pertaining to FBW/AJJ & EWS/AJJ.
2	Issue of CUG Sim cards and allied correspondences	Pertaining to FBW/AJJ & EWS/AJJ
3	Checking and verifying the contract First & Final Bills and on account running bills etc.	Pertaining to FBW/AJJ & EWS/AJJ

4	Releasing of Earnest money deposit, security deposit and performance guarantee after completion of work based on No claim Certificate from contractor and No due/completion certificate received from department.	Pertaining to FBW/AJJ & EWS/AJJ
5	Attending of works in the absence of G.Section staff proceeding on duty / leave / sick and other urgent works as and when assigned by the Officers concerned	Pertaining to FBW/AJJ & EWS/AJJ

2) Ch.OS/Genl. Section:

Sl. No.	Description of duties	Remarks
1	Calling of Quotations within the Power of Junior Administrative Grade (JAG) passing of Contractor's Bills.	Pertaining to Quotation work / Open Tender works of FBW/AJJ & MFBW.
2	Repair proposals of FBW and Machineries & Calibration	Pertaining to FBW/AJJ & MFBW.
3	Releasing of EMD to unsuccessful tenders	Pertaining to FBW/AJJ
4	Processing of contractor bill and IPAS	Pertaining to of FBW/AJJ & MFBW.
5	Assisting of OS/G.1 in all tender works and chasing of pending works of Hd.Qrs. & A/Cs/PER etc.	Pertaining to FBW/AJJ & EWS/AJJ

3) OS/Genl.Section:

S. No.	Description of duties	Remarks
1	Collecting the local purchase bills from the all shops preparing the statement and bill for reimbursement, enter into the voucher register and bill entry into IPAS and forward/hard copy sent to FA&CAO/S&W/PER for passing the bill, after credit the local purchase amount in Dy.CE/EWS/AJJ account and withdrawn from ATM and distribute the amount to the concerned SSE/Ch.OS who spent the money in advanced	Pertaining to EWS & FBW/AJJ
2	Approval by competent authority for celebrate national functions and get concurrence from FA&CAO/S&W/PER and get sanction from competent authority and prepare THE PAY ORDER FOR PAYMENT AND OTHER ALLIED WORKS	Pertaining to EWS & FBW/AJJ
3	Renewal of consent order for water act and air act through online and legal opinion from LAW Branch for the payment after getting legal opinion we get the approval/ sanction from	Pertaining to EWS & FBW/AJJ

	competent authority for arrange payment through pay order. Looking after all the works like Pollution control Board – Every Year. Renewal of Factory licenses every year through online and legal opinion from LAW Branch for the payment after getting legal opinion we get the approval/sanction from competent authority for arrange payment through pay order. Testing of pressure vessel from EWS and FBW every year and payment has to be arranged through Demand Draft. After receiving letter from Joint Director of Industrial Safety and health Vellore	
4	Renewal of Motor Vehicles License of all vehicles and getting fitness certificates every year. We have to arrange payment through pay order with approval of Competent Authority	Pertaining to EWS/AJJ in consultation with Sr.SE/MW Shop
5	Issue of Staff Gate Pass/Contractor, quotation work contractor, Zonal contractor gate pass etc.	Pertaining to EWS & FBW/AJJ
6	Demand Draft receiving from Rail Vikas Nigam Limited, Chennai towards lab testing charges to remit the same at cash office/MAS for encashment	Pertaining to EWS & FBW/AJJ

4) Sr.ClerK/Genl. Section:

S. No.	Description of duties	Remarks
1	Preparing of Monthly, Quarterly, Half yearly, Annual statements pertains to Contractors etc.	1) LOA statement to Dy.CE/W/ MAS-MLY 2) Contractor Labour statement to CPO/MAS-QLY 3) Audit contract entered into/ completed
2	Assisting in preparing of contractor bills	EWS & FBW/AJJ
3	Maintaining the Measurement Book and issuing the M.Book to the concerned SSE of EWS and FBW	
4	All misc ellaneous work and attending of works in the3 absence of G.Section staff proceeding on duty/leave/sick and other	

	urgent works as and when assigned by the officers concerned.	
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Presently, 4 ministerial staff is looking after the General section of the above said works. In present situation there is a lot modification work take place through digitization of e-office, e-tender, IRPES, IMMS, HRMS, internet etc. Moreover, the production in Millwright line side, Tinker shop are stopped, FBW welding work is outsourced and also reduced the annual target of EWS/AJJ set by the Railway Board, From the above reasons, that reflects in the procurement of indents which are reduced in EWS/AJJ. Since the work load of General Section activities are also reduced. So, the 4 ministerial staff (Including LR) is sufficient to manage the present system of work load and continued on need base.

In General section, the details provided that the two tenders are processed in the year 2019 & 2020 and 3 tenders are processed in the year 2021 (upto March-2021).

Hence work study team has allowed 4 staff on need base at

3.24.6 Account Section:

Staff deployment and Duties:

Sr.SO(A)

(Divisional Accountant/Representative of FA & CAO/S&W/PER)

Over all in-charge - Costing and Accounting of EWS/AJJ activities. Tender Opening, Funds Certification of Both Stocked / Non-Stocked Indents, Suppliers & Contractors Bills Certification, Rate List Verification, Various Stages of Budgeting of WMS, REVIEW & M&P, Shop & General On Cost Budget, Proforma On Cost Budget etc. Coordination with the Accounts offices in connection with Transfer of Debits/Credits, AMs, Audit References and other references pertaining to the Accounts Aspect.

1) **Ch.OS/Accounts:**

General Supervision and Over all in charge of the Accounts and also looked after the maintenance of the WGR (Work Shop General Register) of foreign Railways/Construction units/6 divisions in SR/EWS-Shops)

WGR – (Workshop General Register)

- WGR = Labour Sub Ledger + Stores Sub Ledger
- Workshop General Register is a Subsidiary Register of WMS Account maintained for various Divisions / CN Units / Shops / Foreign Railway Separately.
- When each and every Work Order is opened for various shops, the same is recorded in the WGR.
- The Expenditure on account of Labour, Stores , Labour On Cost and Stores On Cost on various Work Orders of the manufactured jobs of the various shops.
- The Charges incurred on each Work Order whether in hand or completed, Shop wise/ Division wise / Foreign railway etc.,
- The Direct Labour expenditure is posted against each work from the Labour Sub Ledger.
- Direct Material Cost is posted from the Stores Sub Ledger.
- Proforma On Cost Charges are also posted in the WGR.
- Bills prepared for the manufactured jobs that are raised against various Home / Foreign Railway Consignees are posted in the WGR.
- On receipt of the advice of completion of work order from the Shop/PCO, the completion and the Debit side bookings are verified and noted against the work Order in the WGR.

2) **OS/Accounts:**
Allocation:

- Allocation of expenditure, Balance Return, Acceptance for Stocked Items, Feeding in IPAS and Preparation of Out-Turn Statement and allocation of expenditure to work orders for Crossing Shop,
- Preparation of on cost budget for arriving percentage and getting vetting from FA&CAO/S&W/PER, Average hourly rates,
- Allocation of expenditure to work orders pertaining to all the Other Shops in addition to Crossing Shop,
- HT Bills, CAP & REV Adjustments, Labour Suspense.

3) OS/Accounts:

Budget:

Budget Control and Monitoring, Preparation of various stages of Budgetary Reviews of WMS Budget , Revenue Budget Demand No.07, M&P Budget, Proforma On Cost Budget, NS & S.Indents funds certification monitoring, MPR & PCDO, CUG Bills, BSNL Telephone Bills. Preparation of Revenue Budget Demand No 03, 04, 11 & 12.

4) OS/Accounts:

WMS – (Workshop Material Suspense)

Transfer of Debits & Credits:

Transfer of Debits & Credits of the manufactured jobs on various Home/Foreign Railway Consignees through FA&CAO/S&W /PER in e-recon, Cash Estimate, Replying all the Audit and Accounts Reports. In addition preparation of Computerised WGR Bills of the Home / Foreign Railways / Construction Units / 06 Divisions/11 Shops & Lab Testing Charges Bills and Maintaining the DATA Base.

Apart from the above, to assist in computerised processing of various Budgetary Reviews/WGR etc. Furnishing Positions related to Accounts Matters as and when asked for by officers.

At present 4 staff are looking after the WGR, Allocation, Budget and WMS in account section. These 4 staff is sufficient to manage the present system of work load and continued on need base.

Further the work study team has additionally allowed one staff for leave reserve.

Hence work study team has allowed 5 staff on need base in account section.

3.24.7 Total requirement of Ministerial staff in Working Branch:

Sl.No	Section	Requirement allowed by Work study
1	Time office	5
2	Administrative section	2
3	Store section	6
4	General section	4
5	Accounts	5
	Total	22

3.24.8 Sanction Vs Requirement of Ministerial staff in Works branch:

Category	Sanction	Actual	Requirement	Surplus
Ch.OS	8	7	8	0
OS	23	12	12	11
Sr.Clerk	4	1	1	3
Jr.Clerk	1	0	1	0
Total	36	20	22	14

3.24.9 Recommendation No.16

11 vacant posts of OS in GP Rs. 4200/- and 3 vacant posts of Sr.Clerk in GP Rs. 2800/- are found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.

(Total -14 posts)

3.25 Ministerial in Personnel branch & other staff:

3.25.1 Staff strength at Ministerial staff in Personnel branch:

As on April - 2021, 9 staff is working against the sanctioned staff strength of 18. The grade wise detail is tabulated below.

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	Ch.OS	2	1	1	0
2	OS	5	3	2	0
3	Sr.Clerk	2	0	2	0
4	Jr.Clerk	0	0	0	0
5	Ch.S&WI	1	1	0	0
6	Sr.Translater	1	0	1	0
7	Steno	1	1	0	0
8	Record Sorter	1	1	0	0
9	Roneo Operator	1	1	0	0
10	MV Driver	1	0	1	0
11	J.Peon	2	1	1	0
12	B.Peon	1	0	1	0
	Total	18	9	9	0

3.25.2 The common Activities involved in Personnel Branch:

1) Establishment/Cadre Section:

- Appointments
- Transfers (within Division)
- Inter Railway/Inter-Divisional Transfers.
- Fixation of pay, stepping up of pay etc.
- Preparation of statements like MA Report, quarterly, half yearly, Lok Sabha questions, Vacancy Statements etc.
- Promotions (Non-selection)
- Conducting selections.
- Dealing with V.R. Cases.
- Maintenance & Publication of seniority lists
- Registration of Transfer requests and giving acknowledgements.
- Making entries in SR.

- Dealing with cases of purchase of movable and immovable properties.
- Issue of NOC for obtaining pass port to visit foreign countries.
- Sending SRs and receiving SRs on transfer.
- Upgradation under MACP scheme.
- Dealing with grievances of employees, through trade unions etc., Various Inspection Notes.
- Medical decategorisation, creation of supernumerary posts.
- Remarks for PNM at Divisional/HQ level.
- RTI Act – offering Remarks, supplying documents (Copies) to SWI/RTI.
- Certifying service details of employees on the applications to be submitted for admission to Kendriya Vidyalayas.

2) **Bill Section:**

- ✓ Preparation of Salary Bills & Supplementary Bills
- ✓ Withdrawal of Provident Funds – Applications.
- ✓ Bills for Cash Awards,
- ✓ Leave regularization bills.
- ✓ Composite transfer Grants,
- ✓ Bills on arrears of DA/NDA
- ✓ Preparation of Income Tax Statement, Form 16
- ✓ Preparation of PLB.
- ✓ Preparation of Salary Bill and other Correspondences related with Gazetted Officers.
- ✓ Preparation of anticipated debits (withholding of DCRG/Non-vacation of quarters).
- ✓ Calculation of interest dues on various advances.
- ✓ Issue of salary certificates & Last Pay certificates etc.
- ✓ Maintenance of advance registers.
- ✓ Preparation of working sheets for re-fixation of pay and getting approval on supplementary bills.
- ✓ Court attachment - Recovery as per the orders of courts duly maintaining register.

- ✓ Clearance of Audit and Accounts Inspections reports and offering remarks.
- ✓ Calculation of OTA.
- ✓ Arranging Children Education Allowance.
- ✓ Redressal of staff grievances pertaining to Bill matters.
- ✓ Passing of Leave encashment.
- ✓ Recovery of damage rate of rent, Manual preparation of WCA compensation, Ex Gratia Lumpsum payment.
- ✓ Offering para-wise remarks to various court cases to Court section.
- ✓ RTI Act – Offering Remarks, supplying documents (Copies) to SWI/RTI.

Apart from the following activities is also dealing by personnel branch staff:

- Settlement for retirement staff
- Dealing of DAR cases
- Issuing of all types of Pass - Section:
- Dealing of RTI matters
- Arrange and conducting trade union PNM meetings etc.

3.25.3 **Railway Board Yardstick:**

As per the Railway board's yardstick of Personnel Department vide letter No. E(MPP)2015/1/14 dated on 12.10.2017. The work study team calculated the manpower requirement is based on the Railway board yardstick in personnel branch.

The details of Railway Board Yardstick:

Sl.No	Description	Yardstick
1	Pay Bill Sections	One Bill Clerk for 300 Employees
2	Service Record	One Clerk for 500 SRs
3	Cadre sections, where Policy/transfer/selection/ Indent etc	One Clerk for minimum/Deptt. Thereafter Two Clerks for 1200 Employees
4	Note: ✓ Each Bill Clerk is to be provided with a PC with Internet connectivity separately.	

	<ul style="list-style-type: none"> ✓ Specialized training is to be imparted to bill Clerks to raise their productivity ✓ Each Cadre dealer is to be provided with a PC and printer with Internet connectivity. ✓ A separate section can be created for processing transfer cases of employees of all departments and its updation in COMPTRAN.
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Further the Railway Board has revised order No. 11-2019/SPMPS/Yardstick/2, dated 30.06.2020, it has been decided that the yardstick/norms of various O & M activities across all departments on the railway stand reduced by 15% on as is where basis as an interim measure with effect from 01.07.2020.

Hence, the study team has further revised the yardstick by 15 %.

Therefore, the application of above yardstick as

- **One bill clerk for 345 bills, $(300 \times 15/100 + 300)$**
- **One clerk for 575 SRs $(500 \times 15/100 + 500)$ and**
- **One clerk minimum/Dept. Thereafter 2 clerks for 1380 $(1300 \times 15/100 + 1200)$ cadres strength** in Cadre sections where policy/transfers/selections/indent work etc. are carried out.

In personnel branch, two computers with net connection, one printer and one scanner are available.

Note:

The necessary computers with net connections and printers may be provided to the staff by procurement through the concerned section controlling officers.

3.25.4 Man power Requirement of Personnel branch staff Vs Railway Board's Yardsticks:

The staff matter/cadres like Bills, SRs, policy matters, selection, promotion, transfer, etc are dealt in various departments. Hence the work study team has calculated the requirement of manpower based on the revised Railway Board Yardstick as tabulated below.

Unit	Bills		SRs		Cadres	
	No of Bills	345 Emp/	No of SRs	575 Emp/	No of Emp	1380 Emp/ Clerk

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		Clerk		Clerk		
PB/EWS	397	1.15	397	0.70	431	431/1380 = 0.31
Say as		1		1		1

As per revised Railway Board's yardstick each staff can deal 345 Bills and 575 SRs respectively. Hence, the requirement of manpower for Bills, SRs and Cadres are arrived based on the Railway Board's revised yardstick by the work study team given as below.

For all categories of Bills	-	1 staff
For all categories of SRs	-	1 staff
For Cadres	-	1 staff
Over all incharge	-	1 staff
Total	-	4 staff
LR at 12.5% (0.5 say as 1)	-	1
Total staff requirement	-	5 Staff

Hence work study team has allowed 5 ministerial staff in Personnel branch.

3.25.5 Welfare Inspector:

Common duties of Welfare Inspectors:

Generally, the Chief/Staff & Welfare Inspectors are being attached with the sections for the Court case, Compassionate Grounds appointment, Welfare activities of staff matters, Settlement related work, Periodical Inspections over EWS shop floors, PNM meeting, covering of gate meetings, information in regard to ECA statements, HOER, Job Analysis / reclassification of posts, Certification of Rosters, Accompanying Officers on Inspection and reply to HQ/Railway Board , CA iii, MOSR/MP references etc.,

In view of the above, the work study team has allowed and continued the existing one staff of Ch S&WI.

Hence the work study team has allowed one staff of Ch S&WI in Personnel branch.

3.25.6 Sr.Translator:

One vacant post of Sr.Translator is available against the sanctioned strength of one. At present, the staff is deputed to HQ for Hindi training classes. Hence, the work study team has recommended one vacant post of Sr.Translator for surrender.

3.25.7 Stenographer:

Common Duties and Responsibilities of Stenographers:

- Maintaining the Confidential/Secret/Vigilance/SPE/D&AR records.
- Assisting concerned officer in conducting Vigilance/D&AR enquiries.
- Maintaining and updating the Annual Performance Appraisal Reports of all the Group C staff working in EWS/AJJ.
- Accompanying the officer during their regular /periodical/surprise/safety Inspection viz. Service Improve Group Inspections, Surprise Checks, Night Inspections, Safety Inspections etc and preparing its Inspection Notes and ensuring the compliance.
- Accompanying the officers during the Breakdowns/Accidents and attending Accident Inquiries and preparation of Reports.
- Assisting the Officer in preparation of briefing notes, preparation of tender committee proceedings of various works / contracts of that department / branch.
- Attending the Arbitration Meetings and Recording the Minutes.
- Attending various meetings / conferences and preparation of its minute viz. Video / Tele conferences, Trade Unions PNM / Punctuality Meetings, Co-ordination Meetings, Works Review / Progress Meetings, Expenditure Control Meetings, Scrap Review Meetings, Public Grievances Meetings, etc.
- Any other work entrusted by the officer in day-to-day working.

In view of the above, the work study team has allowed and continued on need base the existing one staff of Stenographer.

Hence the work study team has allowed one staff of Stenographer in Personnel branch.

3.25.8 **Miscellanies Activities:**

1) **Record Sorter:**

At present, the record sorter dealing with receipt & despatch of the Letters received from various Railway Offices/Private Firms with an endorsement of Officers are sent to various sections duly Registered at the Record Section in Administrative office.

In view of the above, the work study team has allowed and continued on need base the existing one staff of Record Sorter.

Hence the work study team has allowed one staff of Record sorter in Personnel branch.

2) **Roneo Operator:**

In the Present environment, there are no activities of Roneo. The existing one Roneo operator is being utilized as a Peon and attached to the AWM office and Administrative Office.

In addition the Roneo operator has been engaged for collection of Stationery Items from GSD/PER, PRESS/RPM & Private firms etc. He is also being utilized for the Opening/Closing Duty of the Administrative Office Alternatively.

Therefore, the work study team has allowed and continued on need base the existing one staff of Roneo operator.

Hence the work study team has allowed one staff of Roneo operator in Personnel branch.

3) **Motor Vehicle driver:**

At present, there is no department vehicle and the officer movement has been carried out by the contract staff. Hence the work study team has recommended one vacant post of M V driver for surrender.

4) **Jamedor Peon:**

At present one Jamedor peon is available against the sanctioned strength of 2. The Opening and Closing duty is carried out at Dy.CE office & Administrative office. Attending the Dy.CE office and administrative Office for doing the works assigned by various Sections.

Therefore, the work study team has allowed two posts of sanctioned strength for attending Dy.CE office, administrative office and Personnel branch on need base.

Hence the work study team has allowed two posts of Jamedor Peon in Personnel branch.

5) **Bungalow Peon:**

Attending all the works of the officer bungalow and doing the works assigned by the officer. Therefore, the work study team has allowed and continued the sanctioned strength of one staff of Bungalow Peon.

Hence the work study team has allowed one staff of Bungalow Peon in Personnel branch.

3.25.9 **Sanction Vs Requirement of Ministerial staff in Personnel branch:**

Sl.No	Category	Sanc	Act	Req	Surplus	Para Ref
1	Ch.OS	2	1	2	0	3.25.4
2	OS	5	3	3	2	
3	Sr.Clerk	2	0	0	2	
4	Jr.Clerk	0	0	0	0	
5	Ch.S&WI	1	1	1	0	3.25.5
6	Sr.Translater	1	0	0	1	3.25.6
7	Steno	1	1	1	0	3.25.7
8	Record Sorter	1	1	1	0	3.25.8(1)

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9	Roneo Operator	1	1	1	0	3.25.8(2)
10	MV Driver	1	0	0	1	3.25.8(3)
11	J.Peon	2	1	2	0	3.25.8(4)
12	B.Peon	1	0	1	0	3.25.8(5)
	Total	18	9	12	6	

3.25.10 Recommendation No.17

2 vacant posts of OS in GP Rs. 4200/-, 2 vacant posts of Sr.Clerk in GP Rs. 2800/-, one vacant post of Sr. Translator in GP Rs. 4600/-and one vacant post of MV driver in GP Rs. 2800/ are found excess to the requirement and the same may be surrendered and credited to the Vacancy Bank.

(Total - 6 posts)

3.26 Summary of staff Sanction Vs Requirement in Shop/Section wise:

Shop	Sanc	Actual	Requirement	Surplus	Para Ref
Machine	53	43	32	21	3.6
Blacksmithy	36	27	25	11	3.7
Crossing	71	39	44	27	3.8
Fitter	14	13	10	4	3.9
Signal Fitter	16	9	4	12	3.10
Structural	88	39	41	47	3.11
Welding	60	43	32	28	3.12
Glued Joint	32	23	31	1	3.13
Loading	3	1	0	3	3.14
Tinker	5	2	0	5	3.15
Painter	7	4	4	3	3.16
Millwright	70	36	45	25	3.17
FBW	28	15	19	9	3.18
Electrical(GS)	20	14	20	0	3.19
Electrical(EOT)	12	7	9	3	
Total -A	515	315	316	199	

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PCO – staff (Progressman & Planner)	3	2	2	1	3.200
Supervisors	44	23	39	5	3.21
Ministerial (WB)	36	20	22	14	3.24
Ministerial (PB)	18	9	12	6	3.25
Total -B	101	54	75	26	
Total-C	616	369	391	225	

CHAPTER – IV

4.0 PLANNING BRANCH REMARKS ON CO-ORDINATING OFFICER'S VIEWS

The draft report was sent through e-office to AWM/EWS/AJJ (Co-ordinating Officer) on 02.06.2021.

As per extant instructions a period of 15 days is allowed for Co-ordinating Officer to offer his remarks. Any remark from Co-ordinating officer is yet to be received till date i.e 21.06.2021.

Hence, the work study report is released.

Note:

- ✓ It is noticed that, no over time is done during the past one year for the production work.
- ✓ Further the latest Railway board circular No.11-2019/SPMPS/Yardstick -2, dated 30.06.2020 is placed as Annexure – III. The Railway board has been decided that the yardstick/Norms of various O & M activities across all departments over the Railways stand reduced by 15%.

The requirement of manpower has arrived as 391 (Para No.3.26) for EWS/AJJ by work study team. As per the Railway board yardstick the requirement of manpower also reduced by 58.65 say 59 (15% of 391). However the study team has considered the 59 posts for future increasing work load for bridge and track items.

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CHAPTER – V

5.0 FINANCIAL SAVINGS

5.1 If the recommendations made in the study report are implemented, the annual recurring financial savings will be as under:

Sl. No.	Category	Grade Pay (Rs)	No.of post	Mean pay (Rs.)	Annual Savings (Rs.)
POSTS RECOMMENDED FOR SURRENDER					
1	Sr.Section Engineer	4600	5	109571	6574260
	Sr. Translator	4600	1	109571	1314852
2	Office Supdt.	4200	13	86463	13488228
	PCO (Planner & Progressman)	4200	1	86463	1037556
2.	Sr.Technician	4200	14	86463	14525784
	Sr.Clerk	2800	5	71078	4264680
3.	Technician Gr.I	2800	175	71078	149263800
	MV driver	2800	1	71078	852936
4.	Technician Gr.II	2400	5	62361	3741660
5.	Technician Gr.III	1900	5	48614	2916840
TOTAL			225		Rs. 19,79,80,596

Annexure-I

STAFF STRENGTH OF EWS & FBW / A.J.J. AS ON 31-03-2021.

S.N.	Shop Name	Bill Unit	Sanctioned Strength					Actual Strength					Vacancies					As per Bill
			Sr. Tech	Tech Gr.I	Tech Gr.II	Tech Gr.III	Total	Sr. Tech	Tech Gr.I	Tech Gr.II	Tech Gr.III	Total	Sr. Tech	Tech Gr.I	Tech Gr.II	Tech Gr.III	Total	
(A)	Technicians (EWS, FBW & ELE)																	
1	Machine	600	24	29	0	0	53	24	6	—	13	43	—	23	—	—	13	43
2	Blacksmithy	602	18	18	0	0	36	17	7	—	3	27	1	11	—	—	3	27
3	Crossing	603	20	40	5	6	71	19	7	1	12	39	1	33	4	—	43	
4	Filter	604	10	4	0	0	14	9	1	—	3	13	1	3	—	—	13	
5	Signal Filter	605	10	6	0	0	16	9	—	—	—	9	1	6	—	—	9	
6	Structural	606	24	48	8	8	88	22	1	—	16	39	2	47	6	—	49	
7	Welding	607	15	37	4	0	60	19	4	—	20	43	—	33	4	—	43	
8	G.J. / WW	608	4	8	1	1	14	4	6	1	3	14	—	2	—	—	11	
9	G.J. / C	608	6	10	2	1	19	3	1	1	3	6	2	9	1	—	11	
10	Tinker	609	3	2	0	0	5	2	—	—	—	2	1	2	—	—	2	
11	Painter	610	5	2	0	0	7	4	—	—	—	4	1	2	—	—	4	
12	Millwright	612	20	39	6	3	68	20	3	—	6	35	—	30	6	—	35	
13	Lofting	608	1	2	0	0	3	1	—	—	—	1	—	2	—	—	1	
14	FBW	616	9	17	2	0	28	9	2	1	3	15	—	15	1	—	15	
15	Electrical (GS)	617	5	9	1	3	18	3	1	3	6	13	2	8	—	—	13	
16	Electrical (EOT)	617	3	6	1	2	12	2	2	3	—	7	1	4	—	—	7	
17	NEW APPOINT	618	0	0	0	0	0	—	—	—	2	2	—	—	—	—	2	
	SUB TOTAL :		180	277	30	24	511	167	47	10	90	314	13	230	20	—	314	

97 Posts (29 in M Shop, 22 in BS Shop, 20 in D Shop, 17 in SD Shop, 5 in W Shop, 8 in P Shop) surrendered on account of Work Study 2019-20 vide Surrender Memorandum dated 18.02.2020 & 06.03.2020

(B)	Helpers :		Helper	Total		Helper	Total		Helper	Total
1	Helper (G.J.)	608	—	—	—	—	1	—	1	—
2	Helper (Electrical)	617	—	2	—	—	1	—	1	—
	SUB TOTAL :		—	2	—	2	2	—	2	—

1 Post (Helper/Ele) surrendered towards 1% target of Rty. Board for the year 2019-20 vide Surrender Memorandum dated 10.12.2019 & 07.01.2020

(C)	Ex-Cadre Posts :		Sr. Tech	Tech Gr.I	Tech Gr.II	Tech Gr.III	Total	Sr. Tech	Tech Gr.I	Tech Gr.II	Tech Gr.III	Total	Sr. Tech	Tech Gr.I	Tech Gr.II	Tech Gr.III	Total	As per Bill
1	MVD (MW)	612	—	1	—	—	1	—	1	—	—	1	—	—	—	—	—	1
2	WCR (MW)	612	—	—	1	—	1	—	—	—	—	—	—	—	1	—	—	—
	SUB TOTAL :		—	1	1	—	2	—	1	—	—	1	—	—	1	—	—	—
	GRAND TOTAL :		180	278	33	24	515	167	48	12	90	317	13	230	21	—	317	

Actuals = 317
As per Bill = 317 (315 salary & 2 Stipend).



S.R. Muthu
For Dy. Chief Engineer
EWS / Arakkonam

STAFF STRENGTH OF EWS & FBW / AJJ AS ON 01-04-2021

S.N.	Category	Sanctioned	Actual	Vacancies	Remarks
I. PCO Staff (Progressman & Planner)					
1	Sr. Technician	2	1	1	
2	Technician Gr-I	1	1	--	
	Sub Total :	3	2	1	
2 Tech Gr-PCO posts surrendered w.e.f 18.02.2020 on account of Work Study 2019-20 vide Surrender Memorandum dated 18.02.2020 & 06.03.2020.					
II. Technical Supervisors (EWS & FBW)					
1	Sr. Section Engineer	39	22	17	2 SSEs working at CPLHQ/MAS (Ex-Cadre)
2	Jr. Engineer	5	16	- 11	Sri A. Murugesan, SSE (w.e.f 27.11.2013)
	Sub Total :	44	38	6	Sri S. Jeyasekar, SSE (w.e.f 28.09.2016)
1 SSE posts surrendered w.e.f 18.02.2020 on account of Work Study 2019-20 vide Surrender Memorandum dated 18.02.2020					
2 JE Posts surrendered w.e.f 31.07.2020 on account of review of vacant post vide Surrender Memorandum dated 12.08.2020					
14 App-JE's appointed on 29.10.2020 & 1 JE on 02.01.2021 (One year Training) on 08.02.2021					
1 SSE transferred to CTE/MAS along with post on temporary basis, retired on 07.04.2015					
Sri P. Senthilnathan, SSE/PCO, temporary transferred to PCEO/MAS, w.e.f 26.06.2019					
Sri P. SARAVANAN, SSE, deputed to work @ TVC for 6 months, w.e.f 26.07.2019					
III. Technical Supervisors (Ex-Cadre Posts)					
1	Safety Officer	1	--	1	
2	Jr. Instructor	1	--	1	
	Sub Total :	2	--	2	
IV. Technical Supervisors (HQ / DIV / LW Posts)					
1	SSE (Electrical)	2	2	--	
2	JE (Electrical)	--	--	--	
3	SSE (Drawing)	1	--	1	
4	JE (Drawing)	--	1	- 1	
5	SSE (Works)	--	1	- 1	
6	CMS (Lab)	6	2	4	
7	CMA (Lab)	--	4	- 4	
	Sub Total :	9	10	- 1	
V. Ministerial Staff (Works Branch)					
1	Ch. OS	8	7	1	
2	OS	23	12	11	
3	Sr. Clerk	4	1	3	
4	Clerk	1	--	1	
	Sub Total :	36	20	16	
VI. Ministerial Staff (Personnel Branch)					
1	Ch. OS	2	1	1	
2	OS	5	3	2	
3	Sr. Clerk	2	--	2	
4	Clerk	--	--	--	
5	Ch. SWI	1	1	--	
6	Sr. Translator	1	--	1	
7	RS	--	--	--	
	Sub Total :	11	5	6	
VII. Office Staff					
1	Sr. SO (Accounts)	1	1	--	
2	Steno	1	1	--	
3	RO	1	1	--	
4	RS	1	1	--	
5	V. Driver	1	--	1	
6	J. Peon	2	1	1	
7	B. Peon	1	--	1	
	Sub Total :	8	5	3	
VIII. Canteen Staff					
	Sub Total :	--	--	--	
	GRAND TOTAL :	113	80	33	64

SUMMARY

	Sanctioned	Actual	Vacancies	Remarks
Last Month :				
WPR	515	317	198	NR = 2, 1) Sri. S. Devaraj, T. 3073, Sr. Tech.,
GPR	113	77	36	2) Sri. D. Delli Sekar, T. 3074, Sr. Tech.,
Total :	628	394	234	
Variations :				
Normal Retirement	--	2	--	ONR = NIL
Vol. Retirement	--	--	--	VR = NIL
ONR	--	--	--	
Transfer inside	--	--	--	Two App. Tech. Gr. III appointed on 02.3.2021 at EWS/AJJ
New appointment	--	2	--	
Transfer Outside	--	--	--	Transfer Outside = NIL.
Total :	--	--	--	Transfer inside = 3 ie 3 CMAs absorbed & posted to Lab/ IWS/AJJ from LW/PER, joined on 01.04.2021.
This Month :				
WPR	515	317	198	
GPR	113	80	33	
Total :	628	397	231	
Arakkondim :				
Act. App. (BU. 05)	7	5	0	Sri. K. MARUTHAPANDIAN, ACMT/Track/ HQ look after the duties of ACMT/EWS/AJJ joined on 22.09.2020.
Arakkondim :				
Act. App. (BU. 05)	68	18	50	18 Act. App. joined on 01.02.12.2020

23 इंजीनियर का
OF THE DY CHIEF
अरक्कोणम
ARAKKONDIM
AS. Dy. J. R. V.
1. 11. 2021

S. R. My
For Dy. Chief Engineer
EWS / Arakkondim

Annexure-II

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RAILWAY BOARD

Dated: 12/10/2017

No. E(MPP)2015/1/41

The Chief Personnel Officers,
All Indian Railways, including Production Units.

Sub: Review of Yardsticks for Personnel Department

Ref : Railway Board letter No. ERB-I/2015/23/25 dtd. 14/05/2015

In reference to above, after review, following Yardsticks are proposed to be adopted for Personnel Department :

S NO.	Activity	Yardstick	
1.	Pay Bill Section(s)	One Bill Clerk for 300 employees.	345
2.	Service record	One Clerk for 500 SRs.	575
3.	Cadre sections, where policy/transfers/selections/indent work etc. is carried out	One clerk minimum/Deptt. Thereafter, two Clerks for 1200 employees.	1380
4.	Note: a). Each Bill Clerk is to be provided with a PC with "Internet" connectivity separately. b). Specialized training is to be imparted to Bill Clerks to raise their productivity. c). Each cadre dealer is to be provided with a PC and printer with "Internet" connectivity. d). A separate section can be created for processing transfer cases of employees of all departments and its updation in COMPTAN.		

Your comments, if any, may be advised to the undersigned within 15 days positively for proper appreciation at this end, by fax at 011-23388198 and Email id dmpp@rb.railnet.gov.in also.

(Mahendra Kumar Gupta)
Director (MPP)
Railway Board

Obtain views from PI & give views from Divisions & write up & let discuss on 10/11/17 FN

CPG Adm

14x12

3/11

Annexure-III

1/1/2020

SN-2

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
RAILWAY BOARD

No.11-2019/SPMPS/Yardstick/2 New Delhi, dated 30.06.2020

General Managers,
All Indian Railways/ PUs

Sub: Revision of Yardsticks/ Norms of various O&M activities on the Railways

Ref: Resolution of full Board Meeting dated

Consequent upon the directive from CRB in December, 2017, a comprehensive "Manpower Strategy Note" was issued to all Zonal Railways in May, 2018. Key component of this strategy was the revision of Yardsticks/Norms of various activities on the Railways. Board in its Meeting held on 28.12.2017 decided that manpower yardsticks for various O&M activities of all departments may be reviewed on account of technological inputs, outsourcing, changes in maintenance practices.

2.0 Accordingly, in May, 2019 Zonal Railways were advised to undertake a Zero Based Review of yardsticks for all O&M activities. Based on the inputs, the detailed views were given for concluding the revision of Yardsticks. Final view has already been given on Yardsticks for Civil Engg (Trackmen), Medical, Accounts and Commercial Departments. However, the same in r/o Civil Engg (Bridge & Works), S&T, Security, Stores, Operating, Personnel and other Miscellaneous Departments have not yet been finalized.

3.0 Pursuant to the decision taken by the Board in its meeting held on 29.06.2020, it has been decided that the Yardsticks/Norms of various O&M activities across all Departments on the Railways stand reduced by 15% on as is where basis as an interim measure w.e.f 01.07.2020. This will however not be applicable to Electrical, Mechanical and Accounts Departments where the revised Yardsticks have already been issued in September 2019.

4.0 The final Yardsticks/Norms for each discipline will be communicated subsequently with the approval of Board on case to case basis. This interim reduction will automatically get superseded once the final revision of Yardsticks/ Norms are issued.

5.0 The PCPO and PFA of concerned Zonal Railway/PU may accordingly revise the Yardsticks/Norms of various O&M activities across all Departments (except Electrical, Mechanical and Accounts) and communicate compliance to Planning Directorate.

This issues with the approval of full Board (ME,MT,MTR,MRS/MMM,MST,MT,FC&CRB)

(Sudheer Kumar) 30/6/2020
Additional Member (Planning)
Railway Board

Copy - CRB, ME,MT,MTR,MRS/MMM,MST,FC,DG/HR, Secy/RB,AM/Revenue

Civil Engg, Works
S&T
Security
Stores
Misc