

G.275 / WSSR – 761920 / 2019-20

**WORK STUDY TO REVIEW THE
STAFF STRENGTH AT SSE/WORKS/SCT
MDU DIVISION**

SOUTHERN RAILWAY

PLANNING BANCH

G.275 / WSSR- 761920 / 2019-20

**WORK STUDY TO REVIEW THE STAFF
STRENGTH AT SSE /WORKS /SCT
- MDU DIVISION**

STUDIED BY

**WORK STUDY TEAM
OF
PLANNING BRANCH**

AUG 2020



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(i)
ACKNOWLEDGEMENT

The work study team acknowledges the valuable guidelines rendered by ADEN/SCT (Co-ordinating Officer), SSE/WORKS/SCT (Co-ordinating Supervisor), and other staffs working under this unit for their valuable guidelines in conducting the work study.

(ii)
AUTHORITY

Annual programme of work studies approved by SDGM for the year 2019-20

(iii)
TERMS OF REFERENCE

Work Study to review the staff strength at SSE/WORKS/SCT - MDU Division.

(iv)
METHODOLOGY

The following methodology has been applied while conducting the study.

1. Collection and compilation of data.
2. Referred Indian Railway Manuals, Instructions and Yardsticks.
3. Observation of field activities and the present system of deployment.

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SUMMARY OF RECOMMENDATIONS

The following **10 vacant posts** are found excess to the requirement and the same may be surrendered and credited to the vacancy bank.

Sl. No.	Category	Grade pay (Rs.)	No. of posts
1	Carpenter Tech I	2800	1
2	Brick layer Tech I	2800	1
3	Plumber Tech III	1900	1
4	Carpenter khalasi	1800	1
5	Plumber khalasi	1800	2
6	Khalasi	1800	2
7	Store watch man	1800	1
8	Lascar	1800	1
Total			10

Total : 10 posts

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CHAPTER – I**1.0 INTRODUCTION**

- 1.1 Indian Railways a vital driving factor for Indian Economy running for transporting Men and Materials across the country for centuries. This network keeps the wheels moving for the development of our Nation in all aspects.
- 1.2 Though the various mode of Public transportation available, Railway is a prime, punctual, safety and cheap transport in our Country. Since Indian Railways is a Government Organization on the interest of cheap transport for Public about 45% subsidized against Passenger Ticket costs.
- 1.3 Invention of Steam Engines during 17th Century is a new phase for mass transportation in London, Railways Mania soon overflowed the shores of Britain and turned to India by Lord Dalhousie who emphasized the importance of Railways in India in the Parliamentary Select Committee during the year 1850 is the root cause of arising Indian Railways.
- 1.4 The First Train of India was flagged off on April 16, 1953 a Saturday at 3.35 pm, between Bordibundar and Thane to a distance of 34 km. Now Indian Railways is the largest Rail Web in Asia and the World Second largest single Management Organization which serves more than 134 crore peoples. It has 18 Railway Zones.
- 1.5 MDU Division was formed on 16.05.1956 and this is the biggest and longest division in Southern Railway with 1356 route km. This division was part of the old SIR (South Indian Railway Company). TVC division was formed in 1979 mainly from MDU division. It extends to over 11 districts of Tamil Nadu and two districts of Kerala State.
- 1.6 The Railway has various Departments ie. Engineering, Electrical, Mechanical, Operating, Signal & Telecom, Medical, Personnel, Accounts, Safety etc. in which Engineering Department maintains Permanent Way, Buildings, Structures and Bridges. The quantum of assets being maintained by Engineering Department is very huge and very sensitive in nature. Hence, the Engineering Branch is viewed as very important in Indian Railways. Engineering Branch is broadly classified into 3 sections are P.Way, Works and Bridges.
- 1.7 Works Branch of Engineering Department is the in-charge for maintaining Quarters, Service Buildings at Stations, Platforms and amenities, Pipelines, Drainages, LC Huts and Gardens etc.

1.8 Various Duties of works wing Staff

1. The duties of SSE/Works are detailed in the various chapters of the Indian Railway Works Manual. The main duties include:

Inspection and maintenance of Service buildings, staff quarters and other structures, Approach Roads, Water supply, drainage and sewage work

2. Inspections

The most important inspections required to be carried out by SSE/Works are summarized below:

- ❖ SSE/Works shall systematically inspect all buildings and structures in his charge and record brief details of repairs to be undertaken as prescribed in the Works Manual.
- ❖ SSE/Works shall maintain petty repairs books at all station buildings and other important buildings as specified in the manual and shall check them during his inspections and ensure prompt action/repairs.
- ❖ He shall inspect bridge foundations and substructures.
- ❖ He shall have details of total requirement of water, sources of water and their yield, storage capacity and shortfall etc. along with complete water supply plans of yards and staff colonies in his charge.
- ❖ The SSE/Works shall also complete history and data of tube wells in his jurisdiction and ensure testing of yield of tube wells and other sources of water once every year in co-ordination with Electrical Department when sub-soil water is at its lowest and decide, according to the seasons, the time of pumping water.
- ❖ At wayside stations, monitoring of pumping hours shall be entrusted with station Master for effective control.
- ❖ He shall control distribution of water supply at main stations, while on way-side stations where engineering staff is not posted, the work may be assigned to pump drivers of Electrical/Mechanical Department.

SSE/Works shall ensure cleaning of Overhead/Underground Storage tanks. He shall be responsible for the disinfections of water supply wherever specified.

- ❖ SSE/Works shall inspect periodically sewerage and drainage system and ensure their efficient performance as prescribed in the Manual.
- ❖ SSE/Works shall periodically inspect land and land boundaries in his jurisdiction as detailed in the Manual and furnish necessary certificates to the Assistant Engineer.

3. Execution of Works

SSE/Works shall be personally responsible for the accruals setting out and execution of all works under his charge according to approved drawings and specifications. He shall plan every work, organize labour in an efficient manner and maintain detailed accounts of materials and tools received and

issued. He shall exercise frequent checks on the quality and quantum of work being done in his charge and submit progress reports periodically as prescribed.

4. Measurement of Works

- Every SSE/Works shall be responsible for proper measurement of contractual works as per powers delegated to him as per the Indian Railways Code for Engineering Department.
- He shall maintain movement registers of measurement Books and Standard Measurement Registers for Works.

1.9 This Work study is conducted at SSE/Works/SCT unit of MDU Division.

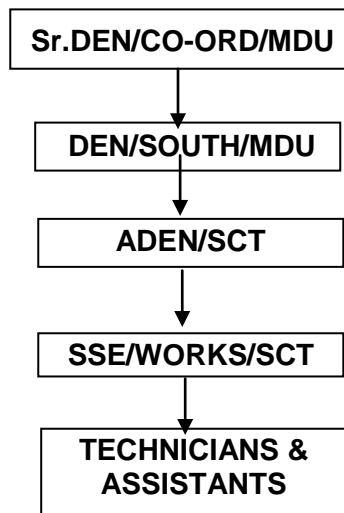
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CHAPTER-II2.0 PRESENT SCENARIO

2.1 SSE/Works/SCT Unit Office is situated near by SCT Station. The Jurisdiction of this Works Unit is from 623.44 kms - 761.61 kms including SNKL – SCT - QLN (Excl) Stations.

2.2 Scalar chain of Authority

At MDU Divisional Level->

2.3 General Duties of Works Branch

- Inspection and Maintenance of service Buildings, Staff Quarters, Huts, Sub Structures, Approach Roads, Water Supply, Pipelines, Drainages, Garden and Sewage works.
- Construction & Rehabilitation of Structures and Buildings

2.4 The Stations under SSE/Works/SCT Unit

1. Sankarankovil (SNKL)	: 623.44 kms
2. Pambakovil shandy(PBKS)	: 635.25 kms
3. Kadayanallur (KDNL)	: 644.29 kms
4. Tenkasi (TSI)	: 660.29 kms
5. Sengottai (SCT)	: 668.12 kms
6. Bhagavathipuram (BJM)	: 674.39 kms
7. Aryankavu H (AYV)	: 683.13 kms
8. New Aryankavu (AYVN)	: 687.22 kms
9. Edapalayam H (EDP)	: 689.50 kms

10. Kalthuruty H (KTHY)	: 692.10 kms
11. Tenmalai (TML)	: 696.02 kms
12. Ottakkal H (OKL)	: 700.83 kms
13. Edamann (EDN)	: 709.70 kms
14. Punalur (PUU)	: 717.50 kms
15. Auvaneswaram (AVS)	: 725.52 kms
16. Kuri H (KIF)	: 729.48 kms
17. Kottarakara (KKZ)	: 737.07 kms
18. Ezhukone (EKN)	: 743.88 kms
19. Kundara East H (KFV)	: 746.97 kms
20. Kundara (KUV)	: 748.74 kms
21. Chandanattop H (CTPE)	: 754.11 kms
22. Killikollur (KLQ)	: 755.83 kms

2.5 Maintenance of Assets

1. Road Maintenance in kms

Length of Roads from SNKL – QLN = 9.630 kms

2. Pipe Line length of metres

Length of Water pipe line (Dia from 100mm to 15mm) = 22560 meters

3. Drainage length in metres

Length of Drainage pipe line = 5400 meters

4. Building & Platform Maintenance

Sl. No.	Category	Plinth Area (Sq.m)	Weightage	Equated Plinth area (Sq.m)
1.	Residential Building	12603.94	1	12603.94
2.	Service building	15361.93	0.7	10753.35
3.	Platform area (Covered)	16374	0.3	4912.20
4.	Platform area (Un covered)	96122	0.1	9612.20
TOTAL				37881.69

5. Quarters :

Station	TYPE-I				TYPE-II				TYPE-III				TYPE-IV				TOTAL QTRS				
	Occupied	Vacant	Condemned	Total	Occupied	Vacant	Condemned	Total	Occupied	Vacant	Condemned	Total	Occupied	Vacant	Condemned	Total	TYPE - I	TYPE -II	TYPE -III	TYPE -IV	TOTAL
SCT	30	9	16	55	26	13	15	54	-	-	-	-	3	-	-	3	55	54	-	3	112
TSI	15	-	4	19	11	-	-	11	1	-	-	1	-	-	-	-	19	11	1	-	31
KDNL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PBKS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SNKL	4	-	-	4	6	-	-	6	-	-	-	-	1	-	-	1	4	6	-	1	11
BJM	-	-	7	7	-	-	2	2	-	-	-	-	-	-	-	-	7	2	-	-	9
AYV	-	-	2	2	-	-	8	8	-	-	-	-	-	-	-	-	2	8	-	-	10
EDP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KTHY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TML	-	-	23	23	-	-	6	6	-	-	-	-	-	-	-	-	23	6	-	-	29
OKL	-	-	3	3	-	-	3	3	-	-	-	-	-	-	-	-	3	3	-	-	6
EDN	-	-	4	4	-	1	-	1	-	-	-	-	-	-	-	-	4	1	-	-	5
PUU	11	-	6	17	2	1	-	3	-	-	-	-	1	-	2	3	17	3	-	3	23
AVS	4	-	1	5	2	-	-	2	-	-	-	-	-	-	-	-	5	2	-	-	7
KKZ	2	2	6	10	1	1	-	2	-	-	-	-	-	-	-	-	10	2	-	-	12
EKN	2	1	2	5	-	1	1	2	-	-	-	-	-	-	-	-	5	2	-	-	7
KUV	-	4	4	8	-	2	1	3	-	-	-	-	-	-	-	-	8	3	-	-	11
KLQ	6	-	1	7	2	1	-	3	-	-	-	-	-	-	-	-	7	3	-	-	10
KKY	-	-	1	1	-	1	-	1	-	-	-	-	-	-	-	-	1	1	-	-	2
MTE	-	-	5	5	-	-	1	1	-	-	-	-	-	-	-	-	5	1	-	-	6
PCM	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2
KYZ	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	2	-	-	2
Wayside Qtrs near LCs	4	4	2	10	-	-	2	2	-	-	-	-	-	-	-	-	10	2	-	-	12
Total	78	20	87	187	50	21	41	112	1	-	-	1	5	-	2	7	187	112	1	7	307

2.6 Working Hours

7.30 - 16.30 hrs with Lunch break of 12.30-13.30 hrs. Rest on Sunday for all Maintenance staff.

2.7 Complaints and Statistics

Receiving of Complaints on repair for Service Building, Quarters and Station building over phone by SSE/Works/SCT, the staff are deputed for attention according to the priority.

Staff on duty are also received petty complaints in person by the Users and the same may be attended on the spot itself if possible. Materials and Men will be mobilized for the other major repairs and attended in the following days.

Some of the complaints are received by written also. Scheduled maintenance is well planned and attended in time i.e before monsoon and in the summer for old Tiled Roof buildings.

Types of Complaints received in general as

- Masonry complaints
- Carpentry
- Plumbing
- Drainage
- Painting
- Miscellaneous

2.8 No of complaints received as per record from Jan 19 – Dec 19

Months	Number of Complaints					
	Masonry	Carpentry	Plumbing	Drainage	Painting	Misc.
Jan 19	45	20	60	26	10	16
Feb 19	53	25	72	25	11	22
Mar 19	48	32	59	32	14	14
Apr 19	39	19	62	19	13	13
May 19	49	28	60	22	12	14
June 19	42	24	39	21	09	18
July 19	50	25	46	18	08	22
Aug 19	55	30	54	32	11	13
Sep 19	43	35	52	17	14	14
Oct 19	42	16	36	23	10	13
Nov 19	49	32	45	22	11	11
Dec 19	60	40	42	19	13	08
Total	575	326	627	276	136	178
Avg/month	48	27	52	23	11	15
Attended	212	123	627	84	95	50
Non Attended	363	203	-	192	41	128

2.9 Stores and Materials

Materials received are bifurcated into 4 Heads and maintained in Separate Registers are as :-

1. Cement
2. Brick
3. Raw
4. Misc.

2.10 Various outsourcing of maintenance activities at SSE/W/SCT section

1. Operation of valve to regulate water supply to the staff quarters, service buildings and Platform at SCT station & TSI station for period of 2 years.
2. Housekeeping contract at open line holiday home & ICF holiday home in Courtallam for a period of 2 years.
3. SNKL – QLN – TSI – KKY maintenance of underground drainage system in railway colony, stations under SSE/W/SCT for 2 years.
4. SNKL – QLN – TSI – KKY maintenance of service buildings, staff quarters under SSE/W/SCT for 2 years.
5. SNKL – QLN – TSI – KKY maintenance of water pipeline system in railway colony, stations under SSE/W/SCT for 2 years.

2.11 Staff strength of SSE/WORKS/SCT

There are 06 staff working against the sanction of 20 posts, the Net vacancy is 14.

Sl no	Category	Sanction	Actual	Vacancy	Excess
1	SSE/Works	1	1	-	-
2	JE/Works	1	1	-	-
3	Sr.TECH	1	1	-	-
4	Carpentry Gr.I	2	-	2	-
5	Carpentry Khalasi	1	-	1	-
6	Brick layer Gr.I	2	-	2	-
7	Brick layer khalasi	-	1	-	1
8	Plumber Gr.1	1	-	1	-
9	Plumber Gr.III	1	-	1	-
10	Plumber khalasi	3	-	3	-
11	Painter Gr.III	1	-	1	-
12	Helper (Painter)	-	1	-	1
13	Store watch man	2	-	2	-
14	Khalasi	3	-	3	-
15	Lascar	1	-	1	-
16	Peon	-	1	-	1
Total		20	6	17	3

CHAPTER-III3.0 CRITICAL ANALYSIS

- 3.1 Railway Board insisted to our Zone to take necessary action to increase the efficiency by all means. The Staff cost is a major part in the total expenditure about 33.3%, hence, Southern Railway gives a keen interest to rightsizing the man power which will give better results in the Operational ratio. The Railway Board has also insisted to conduct Work Studies in all the Units to Right size the Man power in Zero base review on every year.
- 3.2 In this section, most of the works viz., the repairs and maintenance of station, service buildings and staff quarters, cleaning of septic tank, drainage, operation of water supply valve, holiday homes maintenance, maintenance of water pipe line, painting and white washing of building, etc., are being executed through contract only.
- 3.3 The actual staff strength of SSE/W/SCT is 6 out of which 4 are in the field and 2 supervisory staff in office.
- 3.4 The work study team approached the staff requirement as per the yardstick according to the assets maintaining by the unit and allows the man power on need basis according to the outsourcing availability.

3.5 Staff Requirement3.5.1 Building & Platform maintenance

Plinth area of Residential Buildings, Station Buildings and other service buildings are converted into 'Equated Plinth area' by adopting the weightage described for each of them

Sl. No.	Category	Plinth Area (Sq.m)	Weightage	Equated Plinth area (Sq.m)
1.	Residential Building	10044.86	1	10044.86
2.	Service building	5675.75	0.7	3973.02
3.	Platform area (Covered)	11303	0.3	3390.90
4.	Platform area (Un covered)	45951.94	0.1	4595.19
TOTAL				22003.97

As per the yardstick for maintenance of Buildings, one staff is required for every 1550 Sq.m including LR.

Total EPA of Building = 22003.97 Sqm
 No. of staff required = $22003.97 \div 1550$
 = **14.6 staff say 15**

The yardstick prescribed by Railway Board is applicable when all the works are carried out by the staff at Works Branch. At Works/SCT section, the major i.e. 90% of the works such as maintenance of service buildings, station buildings, residential buildings and operation of water pipe line valve is carried out through the Zonal Contract.

However, to manage the emergency situations and supervising the contract work, minimum strength of 3 staff (1 JE + Carpenter Gr.1 + 1 Khalasi) is allowed on need basis for the above said activity.

3.5.2 Road Maintenance

The yardstick for maintenance of roads is for every 5 kms one staff is required including LR.

Total length of road = 9.63 kms

No. of staff required = 1.9 staff say 2 ($9.63/5 = 1.9$)

Therefore, No. of staff required for Road Maintenance = 2 staff (1 Sr.Tech + 1 Brick layer).

3.5.3 Water pipe line, Drainage, Valve operation is maintained by the contract persons.

Anyhow for managing the emergency situations 2 staff (1 Plumber Gr.1 + 1 Plumber khalasi) is allowed on need basis.

3.5.4 Store Watch Man

Presently there is no store watchman available at Works/SCT. Hence on need basis 1 watchmen is allowed in general shift.

3.5.5 Painter

At present there is 1 Painter post is available and same allowed as it is on need basis for painting activity.

3.5.6 Supervisor (SSE)

The sanction strength of SSE is 1 and actual is 1 and the same is allowed for overall monitoring purpose.

3.6 The composite list of Sanction, Actual and requirement

Sl no	Category	Sanction	Actual	Requirement	Surplus
1	SSE/Works	1	1	1	-
2	JE/Works	1	1	1	-
3	Sr.TECH	1	1	1	-
4	Carpentry Gr.I	2	-	1	1
5	Carpentry Khalasi	1	-	-	1
6	Brick layer Gr.I	2	-	1	1
7	Brick layer khalasi	-	1	-	-
8	Plumber Gr.1	1	-	1	-
9	Plumber Gr.III	1	-	-	1
10	Plumber khalasi	3	-	1	2
11	Painter Gr.III	1	-	1	-
12	Helper (Painter)	-	1	-	-
13	Store watch man	2	-	1	1
14	Khalasi	3	-	1	2
15	Lascar	1	-	-	1
16	Peon	-	1	-	-
Total		20	6	10	10

3.7 Recommendations

Sl. No.	Category	Grade pay (Rs.)	No. of posts
1	Carpenter Tech I	2800	1
2	Brick layer Tech I	2800	1
3	Plumber Tech III	1900	1
4	Carpenter khalasi	1800	1
5	Plumber khalasi	1800	2
6	Khalasi	1800	2
7	Store watch man	1800	1
8	Lascar	1800	1
Total			10

CHAPTER - IV4.0 PLANNING BRANCH'S REMARKS ON CO-ORDINATING OFFICER'S VIEWS

The draft work study report for this study was sent through e-office to ADEN/SCT (Co-ordinating Officer) on 27/08/2020 to offer his remarks. Normally a period of 15 days is allowed to offer Co – ordinating officer remarks. In this case, planning branch has not received any remarks after 18 days of submission of draft report. Hence the work study report is released without the remarks of Co – ordinating officer.



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 posts	Money value (Rs)	Total annual savings (Rs)
1	Carpenter Tech I	2800	1	68040	816480
2	Brick layer Tech I	2800	1	68040	816480
3	Plumber Tech III	1900	1	46536	558432
4	Carpenter khalasi	1800	1	41944	503328
5	Plumber khalasi	1800	2	41944	1006656
6	Khalasi	1800	2	41944	1006656
7	Store watch man	1800	1	41944	503328
8	Lascar	1800	1	41944	503328
Total			10		57,14,688

ANNEXURE - I**S.A.V.E. STATEMENT OF SSE/WORKS/SCT**

Sl no	Category	Sanction	Actual	Vacancy	Excess
1	SSE/Works	1	1	-	-
2	JE/Works	1	1	-	-
3	Sr.TECH	1	1	-	-
4	Carpentry Gr.I	2	-	2	-
5	Carpentry Khalasi	1	-	1	-
6	Brick layer Gr.I	2	-	2	-
7	Brick layer khalasi	-	1	-	1
8	Plumber Gr.1	1	-	1	-
9	Plumber Gr.III	1	-	1	-
10	Plumber khalasi	3	-	3	-
11	Painter Gr.III	1	-	1	-
12	Helper (Painter)	-	1	-	1
13	Store watch man	2	-	2	-
14	Khalasi	3	-	3	-
15	Lascar	1	-	1	-
16	Peon	-	1	-	1
Total		20	6	17	3

