



**WORK STUDY TO REVIEW  
THE STAFF STRENGTH OF  
SSE / WORKS / DG  
MADURAI - DIVISION**

**SOUTHERN RAILWAY**

**PLANNING BRANCH**

**G.275 / WSSR-071920 / 2019 - 20**

**WORK STUDY TO REVIEW**  
**THE STAFF STRENGTH OF**  
**SSE / WORKS / DG**  
**MADURAI - DIVISION**

**STUDIED BY**

**WORK STUDY TEAM**  
**OF**  
**PLANNING BRANCH**

**JANUARY - 2020**



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**(i)****ACKNOWLEDGEMENT**

Work Study Team conveys its sincere thanks to DRM/MDU, ADRM/MDU, Sr.DEN/Co-ord/MDU, Sr.DEN/MDU, DEN/N/MDU, DPO/MDU, ADEN/DG, SSE/Works/DG, JE/Works/DG and staff of SSE/Works for their valuable guidance and co-operation in the conduct and completion of the study in time.

**(ii)****AUTHORITY**

Annual Programme of Work studies for the year 2019 – 20.

**(iii)****TERMS OF REFERENCE**

Work Study to review the staff strength of SSE/Works/DG - MDU Division.

**(iv)****METHODOLOGY**

The following methodology has been adopted while conducting the work study:

- 1) Collection of details.
- 2) Interaction with Supervisors and Co-ordinating Officer.
- 3) Yardstick and need base
- 4) Effect of outsourcing on the present working system.

**(iv)**  
**SUMMARY OF RECOMMENDATIONS**

**Recommendation:**

The following posts are found to the excess of the requirement may be surrendered and credited to Vacancy Bank.

Sl.No	Category of Post	GP in Rs	Surplus
1	Tech-III(Carpenter)	1900	3
2	Tech-I(Brick layer)	2800	2
3	Tech-II(Brick layer)	2400	1
4	Helper(Brick layer)	1800	1
5	Tech-III(Painter)	1900	1
6	Lascar	1800	4
7	Helper	1800	3
8	Road lorry driver	2800	1
	<b>Total</b>		<b>16</b>

**(Total Posts – 16)**

**Revised Recommendation:**

The following posts are found to the excess of the requirement may be surrendered and credited to Vacancy Bank.

Sl.No	Category of Post	GP in Rs	Surplus
1	Tech-III(Carpenter)	1900	2
2	Tech-I(Brick layer)	2800	2
3	Tech-II(Brick layer)	2400	1
4	Helper(Brick layer)	1800	1
5	Tech-III(Painter)	1900	1
6	Lascar	1800	4
7	Helper	1800	2
8	Road lorry driver	2800	1
	<b>Total</b>		<b>14</b>

**(Revised Total Posts – 14)**

## **CHAPTER – I**

### **1.0 INTRODUCTION**

- 1.1 Indian Railways have been pursuing a policy of progressively improving both working and living conditions of passengers and staff for providing them with maximum possible amenities in several spheres including **'WORKS' wing of Civil Engineering Department.**
- 1.2 The works wing of Civil Engineering plays a vital role for the maintenance of Station Buildings, Service Buildings, Residential Buildings, Water supply, Sewage & Drainage system, approach Roads, station platforms, passenger platform shelters, FOBs etc.
- 1.3 Indian Railways is a social welfare organization which adopts perceivable change in the attitude, style, execution, spirit of competition and consequent awareness in the organization. It is expected by the society not only for concession, maintenance of buildings and cultures with better standard but also effecting economy, durability, quality, better aesthetics and safety.
- 1.4 For which unified standard of rates and related uniform standard specification for uniform adoption on Indian Railways, for work activities will help in quick updating of location, computerized planning, estimation, contract finalization, execution of building and payment activities through online process.
- 1.5 **Dindugal** is the one of the district of Tamil Nadu. In educational field, this city is a harbinger of Medical and Engineering fields. This is the gate way of Western Ghats to the famous Kodaikanal hills, Palani hills & temple, Madurai Meenakshi temple and tourist places of Thekkadi & Vaigai dam and Munar via Theni. Dindugal is famous for manufacturing of various types of Locks.

- 1.6 The unit of SSE/Works/DG is within the overall control of Sr.DEN/Co.ord/MDU and under the control of DEN/N/MDU and ADEN/DG. An analysis has been made to study the present system of working and the staff requirement has been arrived and is detailed in the subsequent chapters.



**CHAPTER – II****2.0 PRESENT SCENARIO**

2.1 SSE/Works is the field unit for which responsible and functioning as Supervisory official under the administrative control of ADEN/DG. This unit is under one bill unit managed with one Sr.Clerk.

2.2 Senior Section Engineer is the in-charge of the Works unit. His duties are detailed in the various chapters of the Indian Railways Works Manual, the most essential being:-

- i) Inspection and maintenance of
  - Service buildings, staff quarters and other structures
  - Approach roads,
  - Water & drainage lines and sewerage systems.
- ii) Inspection of bridge works as assigned;
- iii) Execution of all new buildings/structural works;
- iv) Accountal and periodical verification of Stores and Tools & Plants in his charge;
- v) Maintenance of land boundaries as specified.
- vi) Removal of encroachments at his headquarters and at other places in his jurisdiction as specified.
- vii) Afforestation and other horticulture works.
- viii) He shall ensure proper training of the staff under him as prescribed in the training modules of the Civil Engineering Department.

Apart from the above, the SSE/Works also look after the preparation of plans, drawings, estimates etc., Also certification of bills produced by the contractors in the performance of zonal and maintenance contract if any.

**2.3 Jurisdiction of SSE/Works/DG:**

From KQN - DG – PUG in the North and DG – GMGM in the west.



## 2.4 Staff position of SSE/Works/DG:

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	SSE	1	0	1	0
2	JE	1	1	0	0
3	JE (SW)	1	1	0	0
4	Sr.Clerk/Works	1	1	0	0
5	Sr.Tech(Carpenter)	1	0	1	0
6	Tech-I(Carpenter)	1	1	0	0
7	Tech-II(Carpenter)	1	0	1	0
8	Tech-III(Carpenter)	3	0	3	0
9	Sr.Tech(Blacksmithy)	1	0	1	0
10	Tech-I(Blacksmithy)	1	0	1	0
11	Tech-III(Blacksmithy)	1	0	1	0
12	Sr.Tech(Brick layer)	0	2	0	2
13	Tech-I(Brick layer)	5	0	5	0
14	Tech-II(Brick layer)	2	0	2	0
15	Helper(Brick layer)	2	0	2	0
16	Tech-I(Painter)	1	1	0	0
17	Tech-III(Painter)	2	0	2	0
18	Sr.Tech(Plumber)	0	1	0	1
19	Tech-I(Plumber)	4	0	4	0
20	Helper(Plumber)	2	0	2	0
21	Sr.Khalasi	0	3	0	3
22	Storeman	2	1	1	0
23	Colony Gangman	0	2	0	2
24	Lascar	6	2	4	0
25	Helper	9	0	9	0
26	Road lorry driver	1	0	1	0
	<b>Total</b>	<b>49</b>	<b>16</b>	<b>41</b>	<b>8</b>

The above scale check given by Sr.DPO/MDU & SSE/Works/DG are exactly same (Placed in Annexure-I).

Details of Quarters, Buildings, Roads, plat forms and Pipelines:

2.5 **Details of Quarters in station wise:**

Sl.No	Station	Types				Total	Vacant	Condemned
		I	II	III	IV			
1	KQN	29	4	0	0	33	0	0
2	ABI	13	5	0	0	18	0	0
3	DG	108	83	9	5	205	0	0
4	TMP	2	1	0	0	3	0	0
5	VDM	3	1	0	0	4	0	0
6	AYR	5	1	0	0	6	0	0
7	VPJ	3	2	0	0	5	0	0
8	CII	2	1	0	0	3	0	0
9	MPA	18	12	0	1	31	0	0
10	KLS	5	1	0	0	6	0	0
11	RED	7	3	0	0	10	9	0
12	PLKN	7	1	0	0	8	7	0
13	ODC	11	2	0	0	13	0	5
14	CHPT	9	1	0	0	10	0	10
15	KNPT	7	1	0	0	8	0	8
16	PLNI	26	88	0	2	116	0	84
17	PPTR	11	1	0	0	12	0	12
18	MDKM	2	2	0	0	4	0	0
19	MVRD	9	1	0	0	10	0	10
20	UDT	11	5	0	0	16	0	0
21	PLKR	10	1	0	0	11	0	11
22	GMGM	13	2	0	0	15	0	15
23	TPMP	7	3	0	0	10	0	10
	<b>Total</b>	<b>318</b>	<b>222</b>	<b>9</b>	<b>8</b>	<b>557</b>	<b>16</b>	<b>165</b>

No. of staff quarters maintained	:	557
No. of quarters occupied as on date	:	376
No. of quarters vacant as on date	:	16
No. of staff quarters condemned	:	165

## 2.6 Station approach, Colony and Service Road details:

Station	Road Particulars							
	Approach				Colony			
	Length(m)	CC	BT	WBM	Length(m)	CC	BT	WBM
KQN	25	0	25	0	1000	0	1000	0
ABI	500	0	500	0	450	0	0	450
DG	500	0	500	0	4500	0	4500	0
TMP	100	0	100	0	100	0	100	0
VDM	200	50	150	0	100	0	100	0
AYR	170	50	120	0	150	0	150	0
KFC	200	100	100	0	0	0	0	0
VPJ	200	0	200	0	75	0	75	0
CII	50	0	0	50	50	0	0	50
MPA	250	0	250	0	0	0	0	0
SMDM	100	0	100	0	0	0	0	0
KLS	145	0	145	0	0	0	0	0
PUG	170	0	170	0	0	0	0	0
API	170	0	170	0	0	0	0	0
RED	0	0	0	0	100	0	0	100
PLKN	0	0	0	0	100	0	0	100
ODC	50	0	50	0	200	0	200	0
CHPT	400	0	400	0	100	0	0	100
PLNI	400	50	350	0	3000	0	3000	0
PPTR	100	0	100	0	150	0	0	150
MDKM	20	0	20	0	100	0	0	100
MVRD	300	0	300	0	150	0	0	150
UDT	20	0	20	0	300	0	300	0
GMGM	300	0	300	0	100	0	0	100
<b>Total</b>	<b>4370</b>	<b>250</b>	<b>4070</b>	<b>50</b>	<b>10725</b>	<b>0</b>	<b>9425</b>	<b>1300</b>

Apart from the above table, 1300 metres road length is available in DG station. Hence the total road length is **16415** (4370 + 10725 + 1300)

## 2.7 Complaints particulars for the last two years:

Month & year	No of complaints Received		Total	Attended
	HQ	Way Side		
Apr – 17	62	40	102	102
May – 17	47	38	85	85
Jun – 17	45	45	90	90
July – 17	55	55	110	110
Aug – 17	66	47	113	113
Sep – 17	60	35	95	95
Oct – 17	48	59	107	107
Nov – 17	49	52	101	101
Dec – 17	57	42	99	99
Jan – 18	51	46	97	97
Feb – 18	47	58	105	105
Mar - 18	87	53	140	140
Apr – 18	64	42	106	106
May – 18	76	38	114	114
Jun – 18	34	25	59	59
July – 18	50	33	83	83
Aug – 18	55	28	83	83
Sep – 18	47	26	73	73
Oct – 18	64	45	109	109
Nov – 18	73	29	102	102
Dec – 18	46	36	82	82
Jan – 19	40	35	75	75
Feb – 19	58	28	86	86
Mar - 19	60	74	134	134
<b>Total</b>	<b>1341</b>	<b>1009</b>	<b>2350</b>	<b>2350</b>

Total No of Complaints received for 24 Months : 2350

Average no of complaints per month : 98

Average no of complaints per day : 3.3

## 2.8 Other Particulars:

Area of Residential Buildings	-	30891 Sq.m
Area of Service Buildings	-	28321.86 Sq.m
Area of PF Covered	-	21266 Sq.m
Area of PF Uncovered	-	137224.5 Sq.m
Drainage Length in Km	-	19.555
Pipeline length in Km	-	29.990

## 2.9 On going Contract work details at SSE/Works/DG:

Sl. No	Description of work	Agt. No & Date	Agt. Value (Rs)	Agency
<b>Maintenance Works</b>				
1	1.Dindigul Station : Repairs to the Retiring Room & Dormitory floor and repairs to hand rail. 2.Dindigul Station: Repairs to pipe line at PF No.5 and replace the pipe line from North Colony OHT.	MDU/534/18 DT.19.12.18.	2054050	T.Sundarraaj, Karur.
2	SSE/Works/DG section: Repairs to Exg. Platform surface in Platform No. 1, 2 & 3 API, ODC & CHPT.	MDU/219/19 dated 30.01.2019	2716033	NNP Engineering & Architect Salem
3	ADEN/DG Sub division: Maintenance of under ground sewerage system in Railway colonies, station buildings and service buildings etc., for the period of two years.	MDU/159/18 dated 22.03.2018	1371050	ASV & CO Udumalpet
4	Dindigul Yard: 1) Construction drain at MDU end duly cleaning the silt in the existing drain. 2) Removal of debris accumulated in yard. 3) Repairing trolley path. 4) Construction of curb wall to restrict trespassing at Level Crossing No.309 and CC cube pitching work.	MDU/267/19 DT.05.08.2019 .	11575537	M/s. Jagadeeswari Constructions, Dindigul.
<b>Total</b>			<b>17716670</b>	

<b>Other Works:</b>				
1	DG-POY – Subway in lieu of level crossing No.36 & 50 (U/M).	MDU/424/18 DT.28.09.18.	39551158	M.Kumaresan, Salem
2	DG-POY – Subway in lieu of level crossing No.25 & 33 (U/M).	MDU/533/18 DT.18.12.18.	41798002	S.Rajendran, Salem
3	DG-POY – Subway in lieu of level crossing No.25 & 28 (U/M).	-	41264571	S.Rajendran, Salem
4	Dindigul Junction: Improvements to circulating area.	-	2638862	J.Abdur Rahman, Dindigul.
5	MDU division: Provision of platform shelters 5 bays each in DG PF 3 & 4 (New 4 & 5) and Tirunelveli PF 1 stations.	-	9426387	Kadal Constructions, Erode.
6	Providing house keeping & hospitality services for ORH at DG & PLNI stations, SRH consisting of 3 rooms and maintenance of garden at circulating area and PF No.1 & 2 at DG for a period of two years.	-	922045	Aadhi Sakthi Dindugal
7	PLNI-POY(BG) section: Transportation facilities, hiring of TATA SUMO or similar Vehicle for a period of 2 years (for Divisional Engineer	MDU/192/18 dated 13.04.2018	1343575	M/s. Sri Venkateswara Constructions, Dindigul.
8	Gauge conversion work: DG-PLNI-POY section: Maintenance of newly laid BG track between DG and PLNI under traffic condition, as part of gauge conversion works between DG & POY.	W/496/DCE/ C/DG- POY/Mainten ance-BG Track dt.22.05.13.	8255050	M/s. Shobana Sree Constructions, Arakkonam.
9	DG-PLNI BG section: Provision of Gang tool rooms – 8 Nos.	MDU/484/17 dated 13.02.2017.	1104042	P. Thirukumar, Palani.
10	Supply of Potable water to Level Crossing gates between KQN-TPJ and DG-EDU stations for the period of 24 months & storage arrangements. 15 LCs (Balance left over works of agreement No.MDU/220/16 dt.27.06.16,	--	1059982	M/s. Aadhi Sakthivel, Dindigul

11	Supply of drinking water in tank mounted lorry/tractor ODC station/colony for a period of one year.	MDU/185/17 dt.26.10.17	309885	ASV& Co., Tirupur.
12	MDU division: Aerial mapping Orthophoto, Photogrammetry survey on the entire MDU division covering all route kilometers and major site features using Unmanned Aircraft System (UAS-Drone).	--	1841740	M/s. Sakura Geoinformatio n Software Research (Pvt)Ltd., Chennai 600 032.
13	<p>1) MDU division: Provision for toilet and dressing room facilities for women staff at A&amp;B category stations (A class Dindigul Jn. Rameswaram, Tirunelveli Jn.) in DEN /North &amp; DEN/South jurisdiction.</p> <p>2) MDU Jn.: Improvements to SSE/PW/BG/MDU office in DEN/Central jurisdiction.</p> <p>3) Construction of Gang Rest room Sholavandan and Kudalnagar stations.</p> <p>4) MDU Jn.: Provision of staff rest room toilet and bath room facilities for TL staff at pit line.</p> <p>5) MDU Jn.: Improvements to park at Railway colony.</p>	--	5174886	Shri. N. Manohar, Chennai.

14	<p>1) Proposed Interlocking 5LCs- LC No.327 (TPJ-Kumaramangalam stations); 30 (Akkaraipatti-Oddanchatram stations); 447 (Srivilliputhur-Rajapalayam stations), 521 (Auvaneeswaram-Kkottakara stations) &amp; 529 (Kundara-Kilkollur stations) in MDU DN.</p> <p>2) Proposed interlocking 3 LCs LC No. 3 (DG-Akkaraipatti stations); 337 (TPJ-Kumaramangalam stations); 534 (Pamban Block-RMM stations) in MDU division.</p>	--	3396133	M/s. Raja Constructions, Vellore.
15	<p>1) Construction of Gang Rest Room at Km.349/300-400 (Pungudi Station) and at Km.383/700-800 (Chettiyapatti station) in SSE/PWAY/MPA.</p> <p>2) Construction of Gang rest room for Gang No.8 at ABI station for Gang No.10 at KM.3/100-200 in SSE/PWay/DG section.</p>	--	831583	M/s. Sivalaya Constructions, Coimbatore.
16	ADE/DG Sub-division: Supply of Potable water to Level Crossing Gates between DG-PLNI-POY stations for the period of 24 months & storage arrangements.	--	2324034	M/s. Shri Eniyan Constructions, Dindigul.
17	TPJ-DG (BG) Section between Kolathur and Manaparai stations: Proposed Construction of a subway (1x4.50x3.60m)RCC Box AT Km.372/400-500 in lieu of LC no.276 (M).	--	27442600	Shri.S. Rajendran, Salem.
18	DG-Manaparai section and zonal piece work period 01.07.2019 to 30.06.2020 "A1"	--	16028850	NSR Constructions, Dindigul.
19	DG-PLNI Section Zonal piece work period from 01.07.19 to 30.06.2020	--	9644854	J. Abdul Rahman, Dindigul.
			<b>21,43,58,239</b>	



From the above table Sl.No. 18 & 19, the zonal piece work provision is also available which can be utilized to any quantum of maintenance works with approval of competent authority in this section. Hence, for additional and special maintenance work manpower is not required as per existing yardstick for the SSE/Works/DG. Further the work study team has not taking any manpower reduction on account of above outsourcing.

#### 2.10 **Other details:**

Motor vehicles and drivers	: 1 lorry (Condemned) & 1 driver
Number of level crossing gates	: 45
Number of bridges:	
Minor, Major & Important bridges	: Data not provided
FOB	: 260 M

#### 2.11 **Staff details:**

In this unit, 33 staff is working against the sanctioned strength of 49 as given below.

No. of supervisors on roll	: 3
No. of clerical staff on roll	: 1
No. of Artisan & Helpers	: 45

The Scale Check of this Unit is placed in Annexure - I.

#### 2.12 **Staff Distribution**

Artisan and Helpers report for duty in the morning and they are allotted with duties depending upon the number of petty complaints received and registered in the petty complaint register. Based on the nature of work and type of work, the staffs collect the required materials and proceed to the work spot to attend the allotted works.

In addition to the above, staff is required to attend complaints received over phone and remarks recorded in the Inspection Notes of officers. The works are supervised by SSE/JE/Works to ensure the quality and quantity of work done by Departmental staff as well as the Zonal contract work of the sanctioned work.

### 2.13 **Work Distribution of actual staff strength :**

#### 2.13.1 **Supervisory and Ministerial staff:**

Sl.No	Category	Sanction	Actual	Vacancy	Excess
1	SSE / Works	1	0	1	0
2	JE / Works	2	2	0	0
3	Sr.Clerk	1	1	0	0
<b>Total</b>		<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>

#### 2.13.2 **Artisans and Artisans Khalasis:**

Sl.No	Category	Sanction	Actual	Vacancy	Excess
<b>Artisans staff</b>					
1	Sr.Tech / Carpenter	1	0	1	0
2	Tech-Gr.I/ Carpenter	1	1	0	0
3	Tech-Gr.II/ Carpenter	1	0	1	0
4	Tech-Gr.III/Carpenter	3	0	3	0
5	Sr.Tech/Smithy	1	0	1	0
6	Tech Gr.I/Smithy	1	0	1	0
7	Tech Gr.III/Smithy	1	0	1	0
8	Sr.Tech / Bricklayer	0	2	0	2
9	Tech Gr.I/ Bricklayer	5	0	5	0
10	Tech Gr. II / Bricklayer	2	0	2	0
11	Helper/Bricklayer	2	0	2	0
12	Tech Gr.I/Painter	1	1	0	0

13	Tech Gr.III/Painter	2	0	2	0
14	Sr.Tech / Plumber	0	1	0	1
15	Tech – Gr.I / Plumber	4	0	4	0
16	Helperl / Plumber	2	0	2	0
17	Sr.Khalasi	0	3	0	3
18	Storeman	2	1	1	0
19	Col.Gangman	0	2	0	2
20	Lascar	6	2	4	0
21	Helpers	9	0	9	0
22	Road lorry driver	1	0	1	0
<b>Total</b>		<b>45</b>	<b>13</b>	<b>40</b>	<b>8</b>

#### 2.14 Duty time (Working Hours)

SSE / Works / DG unit working hours from 08.00 to 12.00 hours and 14.00 to 17.00 hours daily except on Sundays.

#### 2.15 Performance of SSE/Works/DG

- i) Average No. of complaints per day = 3.3 say as 4  
 ii) Average No. of complaints attended per day = 4

Hence the SSE/Works has performed and attended 100 % against the average no of complaints per day.

#### 2.16 Based on the above factors, the review of staff requirement at SSE/ Works/DG unit is detailed in the subsequent chapters.

&&&&

**3.0 CRITICAL ANALYSIS**

3.1 In SSE / Works / DG unit, 16 staff are working against the sanctioned strength of 49 (Annexure – I). The study team analyzed all the collected data, observed the performance of the staff, present condition of the buildings and other assets. As such, the man power required is arrived by applying practicality in the field, present need of the hour and Railway Board yardstick wherever needed.

3.2 The repairs and maintenance of service buildings and staff quarters, major works like drainage and septic tank cleaning, water proofing of leaky roof surface including Mangalore Tiled buildings, maintenance of sewer lines, brick floor, wood works, cement concrete works, white washing of building and levelling of floor area are already outsourced and only petty works are carried out departmentally.

**3.3 Staff Requirement at SSE/Works/DG:****3.3.1 Supervisor category:**

At present there are 2 supervisors (JEs) working against the sanctioned strength of 3 (1 SSE and 2 JEs). Wherever, the number of staff to be supervised is reduced, naturally the number of supervisors is to be reduced. Since, there is 10 – 25 % allocation for supervisory works in the contract itself. So, the present strength of one SSE and two JEs are adequately sufficient to this unit functioning smoothly.

**3.3.2 Clerical staff:**

At present the sanctioned and actual post is Sr.Clerk, it can be managed to assess the staff welfare measures and can be continued as such.

**3.4 Maintenance Particulars:**

Plinth area of residential buildings and service buildings are converted into EPA (Equated Plinth Area) by adopting the weightage prescribed for each of them.

Sl.No	Category	Plinth Area in Sq.m	Weightage	Equated Plinth Area in Sq.m
1	Residential Building	30891	1.0	30891.00
2	Service Building	28321.86	0.8	22657.49
3	PF Covered	21266	0.3	6379.80
4	PF Uncovered	137224.50	0.1	13722.45
			<b>Total</b>	<b>73650.74</b>

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

$$\begin{aligned}
 \text{Total EPA of Building and platform} &= 73650.74 \\
 (\text{ie) No.of staff required} &= 73650.74/1550 \\
 &= 47.52 \text{ say } 48
 \end{aligned}$$

The yardstick prescribed by Railway Board is applicable when all the works are carried out by the staff of SSE/Works. The major works in service and residential buildings are carried out through the Zonal contract and discussed later on.

### 3.5 ROAD MAINTENANCE

The Yardstick for maintenance of Roads / FOB for every 5 km, one staff is required including LR.

$$\begin{aligned}
 \text{Road length} &= 16415 \text{ M} \\
 \text{Length of FOB} &= 260 \text{ M} \\
 \text{Total length} &= 16675 \text{ M or } 16.675 \text{ Km} \\
 \text{No. of staff required for Road \& FOB maintenance} &= 16.675/5 \\
 &= 3.33 \text{ say as } 3
 \end{aligned}$$

### 3.6 PIPE LINE MAINTENANCE

The Yardstick for maintenance of pipeline is one artisan with two Helpers for every 10 Km.

$$\begin{aligned}
 \text{Total length of pipe line} &= 29.990 \text{ Km} \\
 \text{Number of staff required} &= 29.990/10 \\
 &= 2.9 \text{ say as } 3
 \end{aligned}$$

### 3.7 DRAINAGE MAINTENANCE

The Yardstick for maintenance of drainage is one artisan with two Helpers for every 5 Km.

Total length of drainage pipe line	=	19.555 Km
Number of staff required	=	19.555/5
	=	3.9 say as 4

### 3.8 Summary of Staff requirement at SSE/Works/DG

Therefore, the total staff required for maintenance of

Building and station	=	48
Road	=	3
Pipeline	=	3
Drainage	=	4
<b>Total</b>	<b>=</b>	<b>58</b>

### 3.9 Contract works under SSE/Works/DG:

Contract is an attribute to ease the railways by attending the maintenance works such as roof leakage, door repair, latrine block, water tank leakage and repair in mass scale where the value of works is over Rs. 5000. Contractors do most of these works. Petty repair works are however being attended by Railway staff.

### 3.10 The normal schedules of work to be carried out by the contracts generally:

The some of the works are to be carried out by the contract as follows.

- 1) Roof leakages
  - a) Dismantling of ceiling tiles and broken pieces of surki if available.
  - b) Providing surki concrete and laying of tiles.

- 2) Dilapidated compound wall
  - a) Dismantling of compound wall, earth work and concrete.
  - b) Construction of new compound wall
- 3) Dilapidated flooring – dismantling of flooring and re-flooring
- 4) Renewal of damaged sewer lines and pipe lines.
- 5) Supply of stores and material for departmental work
- 6) Replacement of damaged / worn out windows and doors
- 7) Repairs to colony roads and approach roads
- 8) Clearing of vegetation and shrubs
- 9) Maintenance of shelter terrace
- 10) Repair to platform shelter and platform paving
- 11) Housekeeping and hospitality services include periodical white – washing.

### 3.11 Contract details:

As per records furnished by SSE/Works/DG, the value of the contract for works for the period of 2018 – 2019, but the work study team has considered manpower calculation taken for repair and maintenance works only.

### 3.12 On going Contract work details at SSE/Works/DG:

Sl. No	Description of work	Agt. No & Date	Agt. Value (Rs)	Agency
	<b>Maintenance Works</b>			
1	1.Dindigul Station : Repairs to the Retiring Room & Dormitory floor and repairs to hand rail. 2.Dindigul Station: Repairs to pipe line at PF No.5 and replace the pipe line from North Colony OHT.	MDU/534/18 DT.19.12.18.	2054050	T.Sundarraaj, Karur.
2	SSE/Works/DG section: Repairs to Exg. Platform surface in Platform No. 1, 2 & 3 API, ODC & CHPT.	MDU/219/19 dated 30.01.2019	2716033	NNP Engineering & Architect Salem

3	ADEN/DG Sub division: Maintenance of under ground sewerage system in Railway colonies, station buildings and service buildings etc., for the period of two years.	MDU/159/18 dated 22.03.2018	1371050	ASV & CO Udumalpet
4	Dindigul Yard:  5) Construction drain at MDU end duly cleaning the silt in the existing drain.  6) Removal of debris accumulated in yard.  7) Repairing trolley path  8) Construction of curb wall to restrict trespassing at Level Crossing No.309 and CC cube pitching work.	MDU/267/19 DT.05.08.2019.	11575537	M/s. Jagadeeswari Constructions, Dindigul.
<b>Total</b>			<b>17716670</b>	

From the above table, the huge amount of contract value is Rs. 17716670/- and the same amount is taken and converted into monthly salary of Tech-III for outsourced activities that can be deduced from the sanctioned strength to arrive the net requirement of SSE/Works/DG.

Total amount of outsourced value for 2019-20	-	Rs. 17716670/-
The contract cost per month (Rs. 17716670/12)	-	Rs. 14,76,389/-
Mean pay of Tech - III / month	-	Rs. 48,614/-
Converted into Tech - III (Rs. 1476389/48614)	-	30.36 staff
LR at 12.5%	-	3.79 staff
Total and Rounded off	-	34 staff



Hence while calculating the requirement of staff for the quarters, building, station, road, pipeline and drainage maintenance at SSE/Works/DG unit, the number of labourers engaged to work the contract works is to be deducted from the total staff requirement at this unit.

### 3.13 **Calculation of manpower requirement for SSE/Works/DG:**

Net staff required for quarters, building, station, road, pipe line and drainage maintenance for

$$\begin{aligned}\text{Manpower required} &= \text{Actual departmental staff} - \text{Contract staff} \\ &= 58 - 34\end{aligned}$$

**So, the required manpower of departmental staff for the above activities is 24 staff only.**

### 3.14 **Valve Man**

The valves are provided at various locations, in various capacities, types and various types of pumps. At present the valve operation is outsourced.

### 3.15 **Watchman & Lascar:**

At present one staff working as night watchman in SSE/Works/DG and office/store are maintained by two lascars. The work study team allows the above three staff to work in office/store and watchman duties.

**(3- Staff)**

### 3.16 **Caretakers for ORH & SRH:**

At present, ORH & SRH are looked after by contract staff only.

### 3.17 BRIDGE MAINTENANCE:

The bridge details are not provided, but the SSE/Works is given the FOB length as 260 m. Further the Co-ordinating supervisor has mentioned that there is not deputed staff to bridge works, it works are duly maintained by BRI staff only. However, the work study team has allowed two staff for bridge maintenance as need base. **(2 – Staff)**

### 3.18 MOTOR VEHICLE AND DRIVERS:

One condemned lorry is available and further there is no procurement of any motor vehicle. So, the Road lorry driver post is recommended for surrender.

### 3.19 SUMMARY OF STAFF REQUIREMENT

Sl. No	Category	Requirement of staff	Para Ref.
1	Supervisors	3	3.3.1
2	Clerical staff	1	3.3.2
3	Building, station, Road, Pipe line & Drainage Maintenance	24	3.13
4	Valve man	Outsourced	3.14
5	Watchman & Lascar	3	3.15
6	Care taker for ORH	Outsourced	3.16
7	Bridge maintenance	2	3.17
<b>Total</b>		<b>33</b>	

## 3.20 Sanction Vs Requirement :

Sl. No	Category	Sanction	Actual	Requirement	Surplus
1	SSE	1	0	1	0
2	JE	1	1	1	0
3	JE (SW)	1	1	1	0
4	Sr.Clerk/Works	1	1	1	0
5	Sr.Tech(Carpenter)	1	0	1	0
6	Tech-I(Carpenter)	1	1	1	0
7	Tech-II(Carpenter)	1	0	1	0
8	Tech-III(Carpenter)	3	0	0	3
9	Sr.Tech(Blacksmithy)	1	0	1	0
10	Tech-I(Blacksmithy)	1	0	1	0
11	Tech-III(Blacksmithy)	1	0	1	0
12	Sr.Tech(Brick layer)	0	2	0	0
13	Tech-I(Brick layer)	5	0	3	2
14	Tech-II(Brick layer)	2	0	1	1
15	Helper(Brick layer)	2	0	1	1
16	Tech-I(Painter)	1	1	1	0
17	Tech-III(Painter)	2	0	1	1
18	Sr.Tech(Plumber)	0	1	0	0
19	Tech-I(Plumber)	4	0	4	0
20	Helper(Plumber)	2	0	2	0
21	Sr.Khalasi	0	3	0	0
22	Storeman	2	1	2	0
23	Colony Gangman	0	2	0	0
24	Lascar	6	2	2	4
25	Helper	9	0	6	3
26	Road lorry driver	1	0	0	1
	<b>Total</b>	<b>49</b>	<b>16</b>	<b>33</b>	<b>16</b>

### 3.21 Recommendation:

The following posts are found to the excess of the requirement may be surrendered and credited to Vacancy Bank.

Sl.No	Category of Post	GP in Rs	Surplus
1	Tech-III(Carpenter)	1900	3
2	Tech-I(Brick layer)	2800	2
3	Tech-II(Brick layer)	2400	1
4	Helper(Brick layer)	1800	1
5	Tech-III(Painter)	1900	1
6	Lascar	1800	4
7	Helper	1800	3
8	Road lorry driver	2800	1
	<b>Total</b>		<b>16</b>

**(Total Posts – 16)**

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## CHAPTER – IV

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

The Co-ordinating officer views/remarks is received vide letter No.G/6-Staff/WSSR-071920/2019-20 dated on 02.01.2020. The planning branch remarks are given against the Co-ordinating officer's views in para wise as below.

#### 4.1 Co-ordinating Officer Views:

In connection with the above subject, the following remarks are submitted herewith for further needful please.

1. In chapter – II, para 2.9,

- a) Under the “**Maintenance contract**” work headings, except the maintenance of underground sewerage system all other works are repairing the defective assets only and further maintenance of the same to be ensured by SSE/Works/DG.

#### Planning Branch Remarks:

Not agreed to, the repairing & defects of existing works are included in the regular maintenance works apart from the new works. Hence, the man power required to do the work allotted to the contract has been reduced from the requirement of man power. The staff allowed to do the maintenance work may be utilized to maintain the underground sewage system etc. So, the work study team has considered the maintenance contract for manpower calculation.

#### 4.2 Co-ordinating Officer Views:

- b) Under the “**Other contract**” work headings, except the house keeping maintenance works at DG & PLNI (Sl.No.7, 8, 12) are provided for the P.Way maintenance.
- c) The work in Sl.No.4 is an improvements work to circulating area and further maintenance of the same to be ensured by SSE/Works/DG.

- d) The zonal piece work in Sl.No.18 & 19 is there for decades from now and the corresponding effect on manpower were already dealt in earlier studies (Refer Report No.G/275/WSSR-501314/2013-14).
- e) Other works (Sl.No. 1 to 3, 5, 9 to 11 and 13 to 17) are creation of additional assets, warranting further maintenance.

#### **Planning Branch Remarks:**

Not agreed to, the work study team has not taken any manpower on account of outsourcing in other contract works. Further, the Coordinating officer has mentioned that manpower dealt for decades in previous work study regarding zonal piece works. The details are given one by one for previous work study (Report No.G/275/WSSR-501314/2013-14) as below.

- The sanctioned strength of SSE/Works/DG is 48 in the year 2013-14
- The requirement was set by work study as 32, duly surrendered 16 posts in various categories and grades.
- 16 posts were surrendered; vide JMs No.U/P 135/I/surrender/creation of posts/WP dt.17.09.2014 & 18.03.2015.
- The comparative statement particulars of present work study and previous work study reports are tabulated as below.

<b>Sl. No</b>	<b>Description</b>	<b>Previous Work study</b>	<b>Present work study</b>	<b>Remarks</b>
1	No of Quarters	703	557	
2	Condemned Quarters	96	165	Presently, 392 quarters are to be maintained
3	Average complaints/Month	165 (5.5 per day)	98 (3.3 per day)	
4	Equated Plinth Area of Residential buildings	48984.9*	30891.00	
5	Equated plinth area of Service buildings	6242.50	22657.49	
6	Equated plinth area of platform covered	5204.40	6379.80	
7	Equated plinth area of platform Uncovered	-	13722.45	

8	Contract works Amount in Rs	5,76,93,449	1,77,16,670	
9	Manpower reduced on account of outsourcing	24 staff	34 staff	
10	Bridge maintenance	3 staff	2 staff	
11	Roads & FOB	12 Kms	16.675 Kms	
12	Pipeline Maintenance	-	29.990 Kms	
13	Drainage maintenance	-	19.555 Kms	

\*Reduced equated plinth area of condemned and vacant quarters.

From the above table shown, the details are given as follows.

- ✓ At present, the no of quarters are reduced, compared to the previous years.
- ✓ The average no of complaints is 98 per month instead of 165 in previous study.
- ✓ Maintenance of service buildings, platform covered, roads & FOB are increased in considerable value. The work study team has already considered to the above works in the draft report.
- ✓ The manpower reduction from all outsourcing works maintained through zonal piece work contract in the previous work study report.
- ✓ At present, the total outsourcing value is **Rs. 23,20,74,909/-** and if work study has taken 35 to 40% of this amount it will come to **Rs. 8,12,26,218/-**. The reduction of manpower calculation through outsourcing works by the mean pay value of Tech-III is given below.

Amount taken for manpower calculation	-	Rs. 8,12,26,218/-
Amount taken for a year	-	Rs. 67,68,851/-
Mean pay value of Tech-III	-	Rs. 48614/-
Converted into Tech-III (6768851/48614)	-	139 staff

The above manpower calculation is not applicable in practical purpose. Hence, the work study team has taken the less value of

Rs. 1,77,16,670/- and calculated the manpower requirement. Therefore, the calculation of manpower on outsourcing accounts stands good.

Further, compared to the past and present method of working with regards to the changes in the quality of materials, working nature, technological improvement in the method of cleaning etc has reduced the time taken per activity and there by reduced manpower also.

#### 4.3 **Co-Ordinating Officer Views:**

2. In Chapter – II, Para 2.10, the minor and major bridges totally 762 are available and to be taken into the maintenance account of SSE/Works/DG as per PCE Circular No.03/2002.

**Planning Branch Remarks:** Explained in Para No. 4.6 as below.

#### 4.4 **Co-Ordinating Officer Views:**

3. In Chapter – III, Para 3.12, the works listed are not Annual Maintenance Contract (AMC), except Sl.No.3 and these works are part of yard remodeling works due to GC of DG-POY line.

#### **Planning Branch Remarks:**

The cleaning the silt in the existing drain, removal of debris accumulated in yard, repairing of trolley path is part of the maintenance works. Further contractual remarks are explained above in the para 4.2

#### 4.5 **Co-Ordinating Officer Views:**

4. In Chapter – III, Para 3.13, the reduction of man power due to contractual work Sl.No.3, ie., 2.64 say 3 staff for the value of Rs.1371050/- may be taken into consideration. And hence the required manpower for departmental activities will be 55 instead of 24.



**Planning Branch Remarks:**

The detailed remarks is explained above in para 4.2

**4.6 Co-ordinating Officer Views:**

5. In Chapter – III, Para 3.17, Bridge maintenance is the part of SSE/works as per PE Circular No.03/2002. Hence man power required for the maintenance activity should be considered atleast @ 1 man for 100 Bridges; it will be 8.57 Say 9 staff for 762 bridges in works DG section.

**Planning Branch Remarks:**

The Co-ordinating officer mentioned that 762 minor and major bridges are available in this jurisdiction. Generally, Minor bridges in the mid section with span less than 6m are to be maintained by SSE/Works and other types of bridges were maintained by SSE/BRI. Moreover the details contained lump sum quantum of bridges and not mentioned the types of bridges. The yardstick for bridge maintenance is One skilled person + 2 helpers for 200 bridges in a year. Moreover the above yardstick has been followed in all divisions over Southern Railway for many years.

At present, the SSE/Works has not deputed any staff to bridge works, but the work study team has already given 2 staff for bridge maintenance on need base, **however considering the Co-ordinating officer views, 2 more staff is allowed and making a total of 4 staff for bridge maintenance.**

Moreover, the PCE circular No. 3/2002 has clearly mentioned the duties of SSE/Works under para No 4.2, for inspecting and maintenance of PPF, RCC water tanks and other steel structures not covered by SSE/Bridges.

#### 4.7 Co-Ordinating Officer Views:

6. In Chapter – III, Para 3.19, Summary of requirement may be suitably modified.

Sl. No	Category	Req. of staff	Para Ref.
1	Supervisors	3	May be increased suitably due to increase in contractual works and to ensure quality and time bound completion of works.
2	Clerical staff	1	
3	Building, station, Road, Pipe line & Drainage Maintenance	55	
4	Valve man - Outsourced	0	No post in scale check
5	Watchman & Lascar	3	
6	Care taker for ORH - Outsourced	0	No post in scale check
7	Bridge maintenance	11	
<b>Total</b>		<b>73</b>	

#### Planning Branch Remarks:

#### The Revised Summary of Staff Requirement:

Sl. No	Category	Requirement of staff
1	Supervisors	3
2	Clerical staff	1
3	Buildings, stations, Roads, Pipe lines & Drainage Maintenance	24
4	Valve man	Outsourced
5	Watchman & Lascar	3
6	Care taker for ORH	Outsourced
7	Bridge maintenance	4
<b>Total</b>		<b>35</b>

#### 4.8 Co-Ordinating Officer Views:

7. Further, it is herewith highlighted that the extension and raising of PF in TPJ-DG section, provision of FOB at all stations are sanctioned and elimination of all LCs planned with construction of LUS/ERR/ROB in near future will increase the net assets for maintenance by works cadre.

#### Planning Branch Remarks:

For all the above works expected in future as mentioned by Co-ordinating officer, the division may create as and when the requirement arises.

#### 4.9 Revised Recommendation:

The following posts are found to the excess of the requirement may be surrendered and credited to Vacancy Bank.

Sl.No	Category of Post	GP in Rs	Surplus
1	Tech-III(Carpenter)	1900	2
2	Tech-I(Brick layer)	2800	2
3	Tech-II(Brick layer)	2400	1
4	Helper(Brick layer)	1800	1
5	Tech-III(Painter)	1900	1
6	Lascar	1800	4
7	Helper	1800	2
8	Road lorry driver	2800	1
	<b>Total</b>		

**(Revised Total Posts – 14)**

**Therefore, the recommended 14 posts may be surrendered at the earliest.**

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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:

<b>Sl. No.</b>	<b>Category</b>	<b>Grade Pay (Rs.)</b>	<b>No. of posts</b>	<b>Mean pay (Rs.)</b>	<b>Annual Financial Savings (Rs.)</b>
1	Tech-III(Carpenter)	1900	2	48614	1166736
2	Tech-I(Brick layer)	2800	2	71078	1705872
3	Tech-II(Brick layer)	2400	1	62361	748332
4	Helper(Brick layer)	1800	1	43817	525804
5	Tech-III(Painter)	1900	1	48614	583368
6	Lascar	1800	4	43817	2103216
7	Helper	1800	2	43817	1051608
8	Road lorry driver	2800	1	71078	852936
<b>Total</b>			<b>14</b>		<b>87,37,872</b>

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