



**COMPARATIVE  
WORK STUDY  
ON HIGHEST AND LOWEST  
BENCHMARKING  
OF  
ENGINEERING GATEMAN  
IN SECUNDERABAD AND JAIPUR DIVISION**

**(G/HQ/WS/463/11/ENGG./Gateman/Comp./2018-19)**

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**WORK STUDY ORGANIZATION  
NORTH WESTERN RAILWAY  
JAIPUR**

### **EXECUTIVE SUMMARY**

Sr. No.	11
Study No.	G/HQ/WS/463/11/ENGG./Gateman/Comp./2018-19
Subject	Comparative Work Study on highest and lowest Benchmarking of Engineering Gatemen in Secunderabad and Jaipur Division
Area	Jaipur and Secunderabad division.
Division	Jaipur and Secunderabad
Department	Engineering
Terms of Reference	As per the directives of Director (Efficiency & Research)/S&T/Railway Board letter no.2017/E&R/2(1)/1 dated 10.05.2018.
Sanctioned Strength	JP – 566    SC -765
On Roll Staff	JP – 546    SC - 671
Vacancy	JP – 20    SC - 94
Projected Surplus Man Power	JP – 67    SC - 88
Total No. of Recommendations	04
Financial Implication	Rs. 745.32 Lac per annum
Month of Circulation	June, 2018

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## **CHAPTER-I**

### **INTRODUCTION**

**1.0** Indian Railway is the biggest government organization in the country whose prime motto is to provide the cheap and best transportation services to their users at a desired level of safety, security and punctuality. Being one of the largest govt. organizations, it plays a vital role in the Indian economy. Now-a-days, Indian economy is facing tough time so it is the moral responsibility of every government organization to keep close watch and check on its expenditure.

In Railways, the process of absorption of modernization has been started and still in progress in every sphere of the system. The conventional stock have been replaced by air brake stock, steam traction replaced by diesel and diesel by electric, piecemeal loading replaced by block rake loading / point to point loading, meter gauge replaced by broad gauge, old type of interlocking replaced by PI/RRI/EI and semaphore type signals replaced by color light signals, installation of panel interlocking at stations and ***construction of bridges over/under on manned or unmanned level crossings on Railway lines have resulted certain activities become fully redundant/obsolete from existing system.***

**As per GM's DO letter no. E/HRD/740/1/PCDO/Railway Board dated 29.04.2013, posts of gateman must be surrendered after the manned gates are closed with the construction of ROB/RUBs or by other means also. In pursuance of Railway Board orders, RUBs/ROBs are being constructed with major investment for the purpose of closure of LC gates. Justification of RUBs/ROBs also indicates saving of manpower.** By the construction of ROB/RUBs over LC gates not only the efficiency of the Indian Railways is improving but it has also become necessary to review the requirement of manpower to increase manpower productivity in this organization.

It was mentioned in the RITES Study on Man Power Planning in IR had also recommended that "It is necessary to design a system for measuring man power productivity, covering all work situations and in all functional departments".

Bench marking is such a System and the concepts of bench marking are as follows.

- a) Bench marking offers as a solution for substantially increasing the Staff Productivity in a scientific and systematic manner.
- b) Bench marking is an approach for establishing operating and productivity goals based on best practices in the industry.
- c) Bench marking is the search for and implementation of best practices.
- d) Bench marking consists of being humble enough to accept that somebody else is better, then being wise enough to learn from them and then match or even surpass them.

In view of the above, the Work Study Organization under control of SDGM ordered to conduct a Comparative Work study on Activity Centers having Highest and Lowest Bench Marking (Engineering Gatemen for Jaipur and Secunderabad Division) over Indian Railways.

## **CHAPTER-II**

### **ACKNOWLEDGEMENT**

#### **2.0 Coordinating Officials of the deptt. :-**

The Work Study Team pays its gratitude to Sh. **Vishal Gupta, Sr. DEN(Co.), Sh. P. C. Som, XEN of JP Division** and **Sh. Amit Agarwal, Sr. DEN(Co.), & Sh. G. Sri Niwasa Nayak, DPO of SC Division** for giving their **valuable guidance and co-operation** to the team during the course of work study. Team is also thankful to all concerned SSEs & Ch. OS for providing data/information and necessary assistance to the team during the course of study.

#### **Terms of reference**

A Comparative Work Study of Activity Centers having highest and lowest benchmark MPR is proposed vide letter number 2017/E&R/2(1)/1 dated 10.05.2018. For North Western Railway the comparative work study is proposed for Engineering Gatemen staff for Jaipur and Secunderabad.

The Work Study Report is included G/HQ/WS/463/11/ENGG./Gateman/Comp./2018-19 for the year 2018-19.

#### **Base for Study**

On the basis of highest and lowest benchmark MPR of Secunderabad Division of S. C. Railway and Jaipur of N. W. Railway, a Comparative Work Study of Engineering Gatemen staff was suggested by Railway Board vide letter no. 2017/E&R/2(1)/1; dated: 10.05.2018.

Benchmarking MPR of Jaipur Division for Engineering Gatemen is 1.12 men per gate and Benchmark MPR of Secunderabad Division is 4.46 men per gate.

#### **Methodology**

1. Collection of data with reference to the calculation of Man Power Ratio of Engineering Department of respective Divisions.
2. Collection of factors effecting the MPR of Jaipur Division as well as Secunderabad Division.
3. Interaction with the Supervisors and Branch officers and observation of pattern of working.
4. Calculation of MPR of Jaipur and Secunderabad Division.
5. Critical Analysis of variation in MPR of Jaipur and Secunderabad Division.

### **CHAPTER-III**

#### **EXISTING SCENARIO**

#### **3.0 EXISTING SCENARIO:**

As per the directives of Railway Board and SDGM, the Work Study Organization of North Western Railway has conducted a Comparative Work study on Activity Centers having Highest and Lowest Bench Marking (Engineering Gatemen staff for Jaipur and Secunderabad division) over Indian Railways.

- 3.1 Man power planning and bench making are complementing to each other, enabling the railways to progressively achieve higher transportation output with the reduced compliment of the staff. These have the potential to bring staff productivity levels at par with the best. Improved staff productivity has not only enable Indian Railways to pay better emoluments to its staff, make higher allocation towards other staff welfare activities but also helped railways to induct new technologies in all spheres of working.
- 3.2 The detail observations, regarding Engineering Gatemen staff, recorded during the course of study are as under:-

#### **3.3 Jaipur Division:**

##### **3.3.1 Cadre of Gatemen:**

Sanctioned Cadre of Gatemen	= 566
On Roll Gatemen	= 546

##### **3.3.2 The Position of existing Manned Engineering LCs over JP Division:**

Titles	Spl. Class		A Class	B1 Class	B2 Class	C Class		Total no. of LCs
	Triple Manned	Double Manned				Single Manned	Double Manned	
Class of LCs	29	28	3	6	1	56	96	219

3.3.3 Details of closure of manned LCs and manning of UMLCs since 01.04.2014.

Year of closure	Spl. Class	A Class	B1 Class	B2 Class	C Class	Total	Manning of UMLCs
2014-15	2	0	0	0	16	18	0
2015-16	1	1	0	0	13	15	0
2016-17	4	1	0	0	21	26	6
2017-18	3	1	0	0	21	25	27
2018-19 (till 11.6.18)	1	1	0	0	08	10	0
<b>Total</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>79</b>	<b>94</b>	<b>33</b>

**3.4 Secunderabad Division:**

3.4.1 Cadre of Gatemen:

Sanctioned Cadre of Gatemen = 765  
On Roll Gatemen = 671

3.4.2 The Position of existing Manned Engineering LCs over SC Division:

Spl. Class	A Class	B1Class	B2 Class	C Class		Total no. of LCs
				Single Manned	Double Manned	
38	23	09	17	0	112	199

3.4.3 Details of closure of manned LCs and manning of UMLCs since 01.04.2014.

Year of closure	Spl. Class	A Class	B1Class	B2 Class	C Class	Total	Manning of UMLCs
2014-15	1	0	0	0	5	6	0
2015-16	2	1	0	1	0	4	15
2016-17	1	0	0	0	8	9	9
2017-18	0	1	0	2	8	11	4
<b>Total</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>21</b>	<b>30</b>	<b>28</b>

## **CHAPTER- IV**

### **CRITICAL ANALYSIS OF VARIATION IN MPR OF JAIPUR AND SECUNDERABAD DIVISION**

1. In order to get the information, NWR Work Study Team visited Jaipur Division and Secunderabad Division to collect the details of staff position and cadre.
2. As per Railway Board letter No. 2017/E&R/2(1)/1 Dated 10.05.2018, MPR of Engineering Gateman of SC Division is 4.46 Men/gate (1324/297) whereas the actual MPR of Engineering Gateman of SC Division is 3.37(671/199). MPR of Engineering Gateman of JP Division is 1.12 Men/gate(606/541) whereas the actual MPR of Engineering Gateman of JP Division is 2.49(546/219).
3. Indian Railway average Benchmark for Engineering gate is 2.30.
4.  $MPR = \frac{\text{Total No. of on roll Gate keeper}}{\text{Total No. of Engineering LCs}}$
5. For assessment of the reason for such huge variation in Benchmark man power ratio, Work Study Team collected relevant data and documents from the concerned divisions.
6. The reason for the abnormal high MPR of 4.46 Men/gate of SC Division SCR is due to wrong projection of men on roll 1324 against 297 manned LCs by the personnel Department of SC Railway to Railway Board. When the actual men on roll staff is 671 against the 199 manned LCs.
7. The data of Engineering LCs which were sending by Personnel department of Jaipur Division was also not correct. According to them, the men on roll were 605 against the 541 manned LCs, whereas the actual men on roll are 546 against the 219 manned LCs.
8. Thus, on the basis of above the actual MPR of SC division is 3.37. whereas the actual MPR of Engineering Gateman of JP Division is 2.49.
9. Though the actual MPR of SC division is 3.37 men per gate, this is still higher MPR than that of Jaipur Division 2.49. This is simply because
  - a. There is no Single manned LCs of SC Division where as in Jaipur division there is considerable number of Single manned LCs i.e. 56 such level crossings are being operated in Jaipur division.
  - b. There is variation in triple manned level crossings i.e. 38 triple manned level crossing at SC division as compare to 29 triple manned level crossing at JP division. Similarly there is considerable variation in "A" class level crossings i.e. 23 "A" class level crossing at SC division as compare to 03 "A" class level crossing at JP division.



10. Since April 2014, 94 manned LCs have been closed till date in Jaipur division, resulted 192 GK have been released. During this period 33 UMLCs have been manned and to full fill the requirement of manpower for these LCs 66 GK +20(RG+LR) = 86 GK staff would be sufficient. In addition to above, as per DEN's/JP views, for the up gradation of 30 LCs, 39 additional staff (including LR+RG) will be required to meet out with future requirement. **Thus 192- (86+39)= 67 posts of GK have been considered surplus and may be surrendered forthwith.**
11. The class wise LCs position of SC Division is as under

Spl. Class	A Class	B1 Class	B2 Class	C Class		Total no. of LCs
				Single Manned	Double Manned	
38	23	09	17	0	112	199

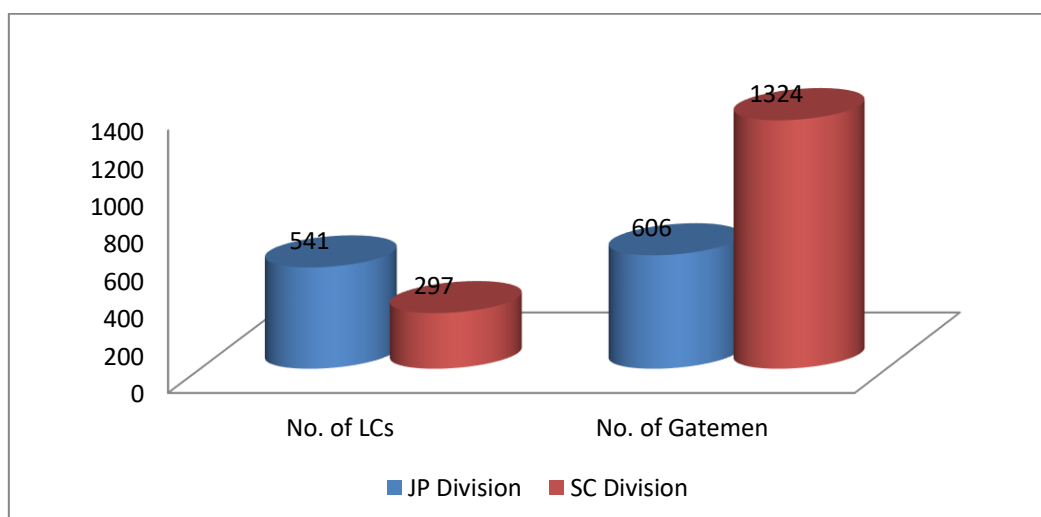
It is clear from the above table that there is neither any single manned LCs nor any unmanned LCs exists in SC Division. There are 199 manned LCs existing at present.

In SC division, last pinpointing was done in the year 2014 and that time sanctioned strength was 765. Since than 30 manned LCs have been closed and 28 LCs have been manned in last 4 years. At present 199 manned LCs are exists and requirement of GK for these LCs is 677. Keeping in view the requirement of the GK the present sanction cadre is very much excessive. **Therefore, 765-677 = 88 GKs are surplus and may be surrendered forthwith.**

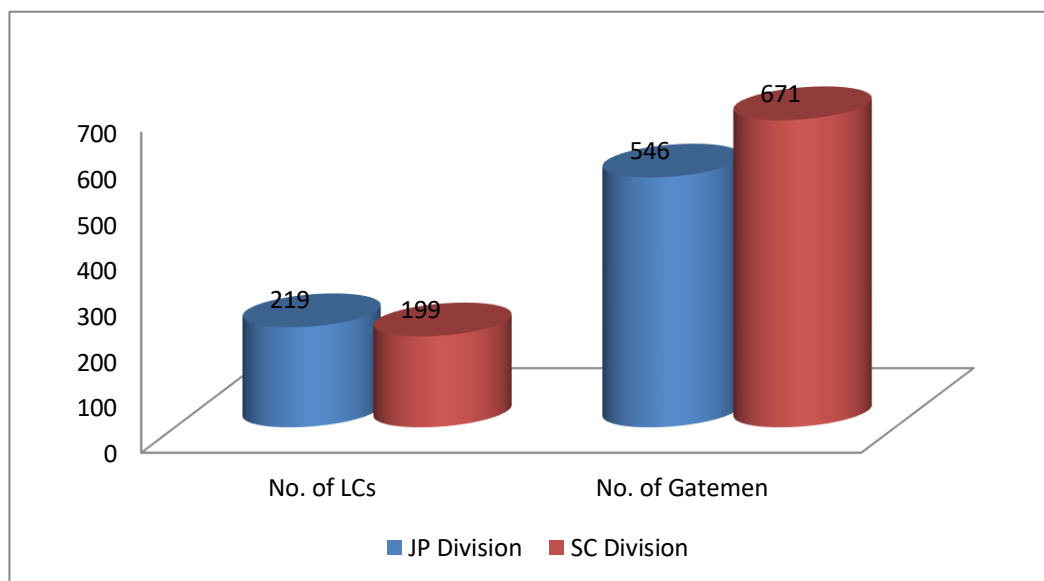
ROB/RUBs are proposed for 43 Level Crossing. On elimination of the Level Crossing additional man power will release. Thus, even after surrendering 88 GKs from the cadre, there will be sufficient fat to meet out the future requirements.

12. Pictorial representation of MPR of JP & SC Division

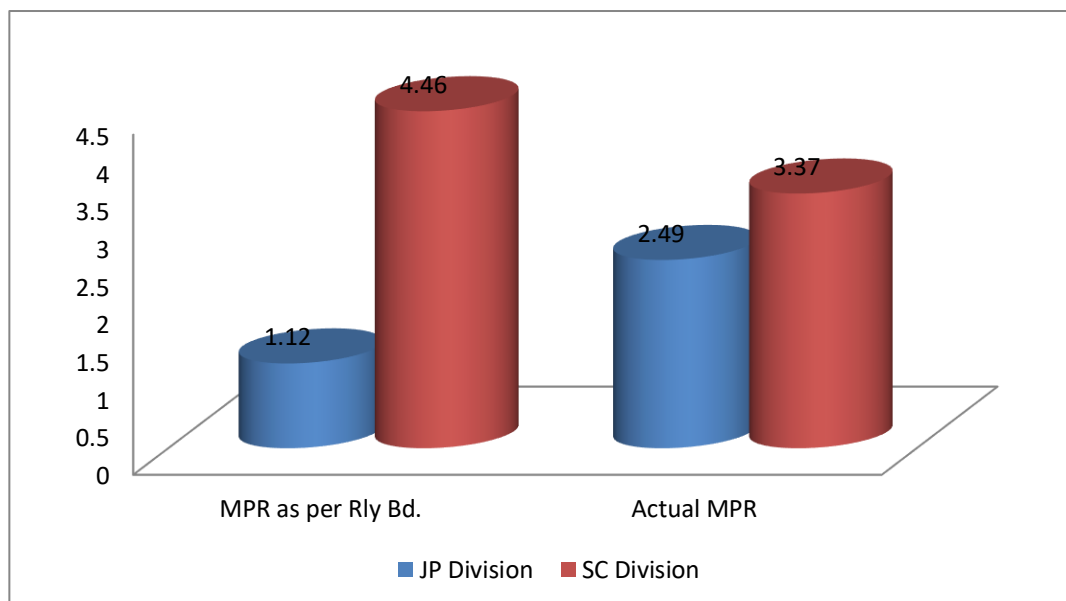
#### 12.1 MPR for Gateman staff of JP & SC division as per Railway Board



## 12.2 Actual MPR of JP & SC Division for Gateman staff



## 12.3 MPR as per Railway Board and actual MPR of JP & SC Division



## CHAPTER- V

### OBSERVATION AND RECOMMENDATIONS

On the basis of critical analysis of the variation in MPR of Engineering department of Jaipur and Secunderabad Division observations and recommendations are as under:-

#### **Observations :-**

1. On calculation of the Benchmarking with existing factual data, it was found that there is no considerable difference in the Bench Marking of Secunderabad and Jaipur Division, as informed in letter No. 2017/E&R/2(1)/1 dated 10.05.2018. Moreover reasons for the existing difference also found technically valid on ground of varies number of different type of Level Crossings.

It was observed that huge variation in the Benchmarking was visible due to wrong projection of data. Both divisions were sending old data to Railway Board. SC division was sending same data without reviewing, since Jan. 2016 and Personnel Branch of JP Division was also not obtaining updated data from engineering deptt.

2. As per Railway Board letter MPR of Engineering Gateman of SC and JP Division are 4.46 Men/gate (1324/297) & 1.12 Men/gate (606/541) respectively. Whereas the actual MPR of Engineering Gateman of SC and JP Division are 3.37 (671/199) & 2.49(546/219) respectively.

#### **Recommendations :-**

1. Since April 2014, 94 manned LCs have been closed till date in Jaipur division. Due to closure of activity 192 GKs have been released. During this period 33 UMLCs have been manned and to full fill the requirement of manpower for these LCs  $66 \text{ GK} + 20(\text{RG} + \text{LR}) = 86 \text{ GK}$  staff would be sufficient. In addition to above, as per DEN's/JP views, for the up gradation of 30 LCs, 39 GK staff (including LR+RG) will be required for future need. **Thus 192- (86+39) = 67 post of GKs staff has been considered surplus and advised to surrendered forthwith.**
2. Sanctioned strength of SC Division was 765 in the year 2014. Since than 30 manned LCs have been closed in last 4 years. At present 199 manned LCs are exists and requirement of GK for these LCs is 677(including LR+RG). **Therefore, 765-677 = 88 GKs are surplus and may be surrendered forthwith.** It is proposed to construct RUB/ROBs on 43 level crossings. Closures of level crossing will surplus the additional manpower that can be use for future requirement as per need.
3. Once an assets is eliminated there has to be corresponding reduction in the Manpower and accordingly on closure of manned LCs, GK must be surrender.

4. As it has been observed that Data being send for purpose of calculating benchmarking are not being monitor appropriately, resulting in to false projection of the figures. Hence, needful corrections may be proposed to ensure receipt of correct and updated data.

## **CHAPTER- VI**

### **FINANCIAL SAVINGS**

#### **6.0 Financial Savings: -**

With the proposal of surrender of 155 posts (67 post of JP Division + 88 post of SC Division) of Group 'C' (GP-1800) the recurring savings per annum in money value amount to as given below:-

#### **6.1 Jaipur Division.**

<b>S. No.</b>	<b>Design.</b>	<b>GP</b>	<b>Mean pay of Pay Matrix</b>	<b>DA @ 7%</b>	<b>Total Money value</b>	<b>No. of posts</b>	<b>Total saving/ month</b>	<b>Total saving/ year</b>
1	Gateman	1800	37450	2622	40072	67	<b>2684791</b>	<b>32217486</b>

#### **6.2 Secunderabad Division.**

<b>S. No.</b>	<b>Design.</b>	<b>GP</b>	<b>Mean pay of Pay Matrix</b>	<b>DA @ 7%</b>	<b>Total Money value</b>	<b>No. of posts</b>	<b>Total saving/ month</b>	<b>Total saving/ year</b>
1	Gateman	1800	37450	2622	40072	88	<b>3526292</b>	<b>42315504</b>

<b>Total (6.1+6.2)</b>						<b>155</b>	<b>6211083</b>	<b>74532990</b>
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**Total recurring savings per annum comes to approx. Rs.745.32 Lac.**